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ON

PUERPERAL INFECTION,

*WITH SPECIAL REFERENCE TO VACCINE TREATMENT.**

BY

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IT is impossible to cover the whole of the subject of puerperal fever. I propose, therefore, to refer to the incidence of the disease, to some of its types which are fairly distinct, to the cause or causes as far as we know them, to some of the pathological changes, and the treatment, preventive and curative.

Until quite recently there has been great difficulty here in the way of making any study of these cases, because there has been little or no institutional treatment for them. They were, and are, certainly not wanted at the Maternity Hospital. No operating surgeon has ever been anxious to mix these cases with his operation cases; but some time ago now the Women's Hospital at Sparkhill had a ward specially built for the reception of septic cases, and into this we are able to take cases of puerperal fever. We also have an arrangement with the Health Committee of the City Council by which those cases of puerperal fever reported to the medical officer of health which are unable to get any proper attention at home are sent in by him to the Women's Hospital. Into this ward last year 36 cases of puerperal fever were admitted. Cases of some septic condition or other—for example, a parametritis or a pyosalpinx, ultimately following on and due to the confinement—are not included in these 36. They were cases of puerperal fever coming on within a few days of the confinement. In the first three months of this year another 9 cases have been admitted; of these 45 cases 15 have died, 6 of the 15 within three days after admission, 6 on days between the seventh and fourteenth after admission, and 3 on the forty-fifth, fifty-ninth, and fifty-fifth day respectively. Even a preliminary examination of the cases shows that the first 6 were cases far too far gone at the time of admission for any treatment to have a chance of success; the second 6 were severe cases in which treatment was tried with very little effect; while the 3 who survived for so long were at death's door many times before they finally succumbed.

I propose to dwell for a short time upon three types of case: (1) Those that are of a mild type and recover easily. (2) Those that are acutely infected and die quickly. (3) Those that are severely infected or ill for a long time, and usually, but not always, recover.

I. *Mild Type.*

In considering the first class—the less severely infected or the mild type—the most noticeable feature about them is that the temperature fell to normal in all but one of them within forty-eight hours after admission; in the one exception the fall was a gradual one, reaching normal on the fourth day. This is really a curious fact when one considers the following information about them. There were 10 cases of this type; we will call the day of confinement in all of them the first day:

1. Fever started on the seventh day, admitted to hospital on the eleventh day with a temperature of 99.6°.
2. Fever started on the third day, admitted to hospital on the twenty-first day with a temperature of 102.6°.
3. Fever started on the fifth day, admitted to hospital on the seventh day with a temperature of 101°.
4. Fever started on the second day, admitted to hospital on the seventh day with a temperature of 100.8°.
5. Fever started on the second day, admitted to hospital on the fourth day with a temperature of 100°.
6. Fever started on the third day, admitted to hospital on the twelfth day with a temperature of 100.6°.
7. Fever started on the twelfth day, admitted to hospital on the seventeenth day with a temperature of 99.8°.
8. Fever started on the third day, admitted to hospital on the seventh day with a temperature of 103.8°.
9. Fever started on the twelfth day, admitted to hospital on the nineteenth day with a temperature of 103.8°.
10. Fever started on the third day, admitted to hospital on the tenth day with a temperature of 99.5°.

The duration of the fever, therefore, extended from two to eighteen days before admission, yet after admission the temperature fell to normal in all of them in practically the same time—namely, about two days. It looks as though in each case the temperature was only waiting for treatment to come down to normal. The symptoms on admission were usually the rise of temperature already mentioned, quickening of the pulse to 100 or up to 120, but not higher; furred tongue; uterus big and tender; lochia usually profuse and foul smelling; constipation; and a general appearance of being ill. Three of the patients had a blunt curetting done the morning after admission: in two of the three some septic retained placenta was found; in the third case the uterus was clean. On admission to hospital the change from a poor, dirty little house, from inefficient attendance, from improper feeding, and in some cases from actual neglect, to a comfortable, warm, clean bed, and to good nursing and feeding; the change from the constant worry and anxiety at home to the general sense of well-being and comfort in the hospital; the change from constipation to a thorough evacuation of the bowels; the change from dirt to absolute cleanliness, helped usually by a gentle antiseptic vaginal douche, and a tonic such as mist. ferri, seems to have been sufficient for a rapid recovery in these cases. We can only assume that the infection is slight, in some cases purely local, and that the resisting powers of the patient only want a little help to bring about a recovery.

II. *Acute Infection: Early Death.*

Early onset of the symptoms, a rise of temperature to 103°–105°, profuse sweats, a pulse of 120 and rising as high as 160, are sufficient to cause grave anxiety. In some of these cases the patient, however, looks fairly well, and except for feeling hot she may be quite comfortable; the pulse has a good volume, the bowels may be acting (but this usually only from treatment), the abdomen is slightly distended but quite soft, palpable, and free from tenderness; there is no uterine tenderness, there is nothing abnormal to be felt in the pelvis, and one may

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be inclined to give a hopeful prognosis. In reality the prognosis is very grave: the pulse gets weaker and weaker, the tongue becomes furred, and dry sordes appear on the lips and gums; the nourishment taken becomes less and less, rigors may or may not occur, prostration becomes more marked, the distension of the abdomen increases, constipation gives way to septic diarrhoea with involuntary evacuation, and the patient rapidly sinks from acute toxin poisoning. The rapidly fatal cases at Sparkhill were all in the latest stages of acute infection on admission, and it was impossible to render them immune to the infection; but that these cases are not necessarily fatal, and that they are not naturally bound to follow the distressing course I have briefly outlined, is known to all and is well illustrated by three cases I have seen recently outside the hospital. The history of these cases is as follows:

CASE I.

Mrs. F., patient of Dr. Middleton. Confinement. Confined on November 28th, 1911; normal; baby weighed 6 lb. 15 oz. Temperature rose to 103° on the third day; the uterus was washed out with an antiseptic douche, a turpentine enema was given, and the temperature fell to 101°. Vaginal douches were subsequently given, the bowels were kept open, and tonics were administered. The patient felt better, and for four days the temperature hovered between 99.6° and 101.5°. On the eighth day she had a rigor, the temperature rose to 105°, and she felt very ill. I saw her with Dr. Middleton, and, under an anaesthetic, I took two swabs from the interior of the uterus for subsequent bacterial investigation, and also by exploration satisfied myself that the interior of the uterus did not contain any placental remains. After the rigor the temperature fell the next two days to normal, only to rise on the third day after the rigor to 103°. In the meantime Dr. Mackey had examined the swabs, and reported a profuse and practically pure infection of streptococcus. Of the vaccine he prepared from this 5 minims (containing nearly 30 million streptococci) were injected; in 24 hours her temperature came down to normal and never rose again. A second injection of 35 million was given four days later.

CASE II.

Mrs. H., patient of Dr. L'Estrange Burges. Normal confinement on February 29th, 1912; the temperature normal, and patient going on well till the seventh day, when the temperature rose to 104°. I saw her with Dr. Burges, and carried out the same procedure as in Case I, but, in addition, injected her with 4 minims of the stock vaccine of Case I—that is, with 25 million streptococci; her temperature fell to 101° in the next four hours, but hovered between 101° and 102° for the next two days, and then rose to 103°, when she had an injection of 25 million streptococci in 5 minims of her own vaccine prepared by Dr. Mackey from the swabs I had taken. Her temperature came down again to 101° for two days, and then rose to 104°, when she had 50 million of streptococci in 8 minims of her own vaccine injected. In less than twenty-four hours the temperature fell from 104° to normal and never rose again.

CASE III.

Mrs. F., patient of Dr. Cochrane; second child, normal confinement. Three days later the temperature rose to 104.2°, with pulse of 144. When I saw her she presented the usual signs of an acute infection in the early stages. Since the patient was hardly able to afford the preparation of her own vaccine, a stock vaccine of the streptococcus prepared by Dr. Mackey from a previous case was used, 25, 30, and 35 million streptococci being injected every third day. After the second injection her temperature came down and never again gave any cause for anxiety.

These cases when first seen, especially Case II, resembled in every way the cases which at a later stage have been admitted to Sparkhill only to die in a very short time. In these private cases treatment by vaccines, etc., was begun early in the disease, whereas in the six cases at Sparkhill that died within two or three days after admission they were only admitted to the hospital on the third, fourth, fourth, tenth, sixth, and fifth days respectively of their illness. In addition to the vaccine treatment in the three cases outlined, attention was paid to the bowels, suitable diet was administered, tonics given, and all of them had the benefit of good nursing. It is, of course, impossible to say for certain that, with the ordinary measures of treatment and without the vaccine, they would have developed the later symptoms such as those of the rapidly fatal cases at Sparkhill, but one cannot overlook the fact that in each of them a rapid and permanent recovery from a very serious condition followed this treatment. Before leaving these acutely infected cases, I must refer briefly to the pathological changes found *post mortem*.

CASE IV.

Mrs. L., aged 28; five previous pregnancies; no miscarriages. Admitted to Sparkhill on May 5th, 1911, with a temperature of 105°, pulse 130. Delivered eleven days previously by a midwife. Two days after delivery she had an attack of acute abdominal pain for which the doctor was sent for; vaginal douches were given and medicine. On the next day she had three rigors. The pain and the rigors continued until her admission to the hospital on the twelfth day, when she was acutely septic and very ill; a most offensive vaginal discharge; no definite abdominal symptoms. On May 7th, two days after admission, Dr. Edge took swabs from her uterus and did a blunt curetting. On the next day her temperature was 101.6° in the morning, but in the evening she had a rigor, and her temperature rose to 105.6°; she had an injection of stock vaccine (25 million streptococci), and her temperature fell to 103° till the next evening, when it rose again to 105°. A second injection of stock vaccine was given this time 30 million streptococci; her temperature came down for a few hours to 100°, but rose on the next evening to 105.4°, when she died. Dr. Mackey's report on the swabs showed an infection of streptococcus and *Bacillus coli*. A mixed vaccine was prepared, but as the patient was near the end when it was ready it was never injected.

Post-mortem Examination.—Body emaciated, no general peritonitis, but some purulent fluid in the pelvis; uterus large and flabby, like an empty bladder, and containing some old blood clot, but not offensive nor obviously septic; the Fallopian tubes contained pus, the left one being distended; the pus escaping from the fimbriated end when the tube was handled; no thrombosis in the pelvic veins; kidneys large and pale; spleen large, about 10 oz.; liver honeycombed with gas bladders, and the wall of the intestine emphysematous in parts, evidently from a gas-producing bacillus; lungs oedematous; heart extremely flabby, no endocarditis.

CASE V.

Mrs. H. Admitted to the Women's Hospital under Mr. Martin on February 19th. Delivered eight days previously by a midwife, who examined the patient several times before delivery. Placenta expressed without any difficulty. On the second day the patient felt very ill and feverish, having a rigor which lasted a long time, and two days later a doctor was called in who curetted the uterus. She, however, continued feverish and shivering until the eighth day, when she was admitted with a temperature of 104.8°, pulse 140, tongue dry and furred, abdomen tender and distended, uterus tender and somewhat fixed by a tender swelling to the right of the cervix. The interior of the uterus was bluntly curetted without an anaesthetic, and swabbed with pure carbolic, and left with an iodoform gauze drain. Swabs of the uterus were taken before she was curetted, and report showed infection by streptococcus, but a streptococcus not the same as that found in other puerperal cases. A vaccine was prepared, but the patient died before it was ready for injection, her temperature rising the day after admission to 105.4°, when she died.

Post-mortem Examination.—General peritonitis, some purulent fluid in the pelvis, and fibrino-purulent adhesions everywhere; uterus flabbly, very friable, contents green and dirty, with blood clots and (?) placenta; the broad ligaments infiltrated, and on cross section honeycombed with pus; the Fallopian tubes, though not much dilated, contain thick yellow pus; the kidneys are congested, their pelves dilated, and they look moderately fatty; liver large, and fatty degeneration; spleen large and soft; lungs congested; heart dilated, no endocarditis.

CASE VI.

Mrs. E., aged 22; married sixteen months; confined on December 18th; normal confinement. On Christmas day acute pain in the abdomen, and on the next day diarrhoea and sickness which persisted profusely for twenty-four hours. When seen by Mr. Hewetson on December 27th was very ill and acutely septic, with a pulse of 140; she was given a morphine suppository which stopped the diarrhoea, and was admitted to the Women's Hospital on December 29th. Great pain in the abdomen, chiefly just below the costal margins when taking a deep breath; the sickness was better, there was albuminuria, but no pus in the urine; she was very emaciated, suffering countenance, tongue dry in the middle, heart and lungs normal, some distension of the abdomen with general tenderness, uterus tender but fairly well involuted. She had two enemata on the night after admission with fair results. In spite of treatment she gradually got worse, and died on January 3rd.

Post-mortem Examination.—Body pale and thin. Abdomen: General fibrino-purulent peritonitis from the pelvis to the diaphragm; uterus empty and not obviously septic; nothing wrong with the tubes, no purulent pelvic cellulitis; kidneys fair; liver large and fatty degeneration well marked. Thorax: Pericardium contains 6 or 8 oz. of thick pus; heart flabby, but no endocarditis; a recent pleurisy over the left lung which is collapsed, no effusion and no abscesses in the lung; right lung adherent in several places, no abscesses, no pleural effusion.

CASE VII.

Mrs. S., aged 26; fourth confinement on September 3rd last year; normal, attended by a midwife. On the second day after confinement had a rigor, became rapidly ill, and was seen by a dispensary doctor on September 7th. I saw her with him on the same day. I found her in the midst of the filthiest and most poverty stricken surroundings, and lying covered where

the skin was exposed by myriads of flies, of which she took not the slightest notice; pulse 148, temperature 104°; abdomen distended and tender in the lower part; uterus and broad ligaments very tender; respiration hurried and very difficult. I admitted her to the Women's Hospital at once. She never recovered complete consciousness; her temperature varied from 103° to 105.8°: septic diarrhoea supervened, with rapid prostration and death five days after admission.

Post-mortem Examination.—The abdomen contained a few ounces of fluid, but no pus; intestines and stomach were much distended with gas; uterus pale, rather large and soft, its cavity empty, and not very septic looking; in the wall of the uterus there were one or two small abscesses; from the left broad ligament pus was obtained by squeezing, and the left tube contained some semipurulent fluid; the pelvic veins were not thrombosed; the spleen was large and septic; liver large, very soft and fatty degeneration, but no abscesses were seen; the kidneys were pale, large, cortex swollen and very fatty—kidneys typical of septicaemia. Thorax: In both pleural cavities there were some ounces of semipurulent fluid; both lungs showed purulent lymph on their exterior, and both on section showed well-marked oedema and septic pneumonia; the substance of the lungs was very friable, and in both there were numerous small abscesses; the pericardium contained a slight excess of semipurulent fluid, and there was early pericarditis noticeable on right auricular appendix; the heart muscle was pale and fatty, and the cavity showed a large amount of septic-looking clot; the mitral valves showed a few recent small vegetations, and the aorta some aortitis of the aortic sinus.

Reference has already been made to those cases that, although acutely infected and very ill, were in hospital for a long time, and ended usually in recovery. If the histories of these cases are not becoming wearisome to you, I would like, as briefly as possible, to record some of these.

CASE VIII.

Mrs. H., aged 27. Admitted to hospital November 15th, baby born on November 9th; examined once before the membranes ruptured by the nurse attending her, but at the actual birth of the baby no one was present except a neighbour. Dr. Sangster was called in to remove the placenta, followed later by profuse haemorrhage; she had a rigor the same day, but after this felt well until the third day. On the first day she and her bedclothes were wet through by the rain coming in through the roof. On the third day she began to feel hot, and her temperature remained high until she was sent to the Women's Hospital on November 15th with a temperature of 105°; pulse 144. On admission, abdomen slightly distended, no tenderness, uterus above the brim, profuse septic discharge, tongue furred, patient very anaemic. Next day, on the 16th, the temperature came down to 103° and her pulse to 118; blunt curretting was done, and some small fragments of membrane got away. Before the curetting was done two sterile swabs were taken of the uterine discharge from which to grow cultures; these cultures showed streptococci and *Bacillus coli*. The temperature did not fall until the third day, when it came down to 101.4°. On the evening of the third day she had an injection of her own vaccine, 4 minims. On the fourth day temperature came down to 100.2°, but on the fifth, sixth, and seventh days rose again to 102°, 104°, and 103°. On the seventh day she had another injection of vaccine, 5 minims. Between then and the thirteenth day her temperature was down in the morning to 99.2° and twice to normal, but up in the evening to 102°, and on the twelfth day to 103°. On the thirteenth day another injection of vaccine, 6 minims, was given, after which her temperature hovered above normal day after day for a fortnight. She had two more injections of vaccine, 8 and 9 minims respectively. The next week the temperature was higher in the evening than the previous fortnight; though down to normal in the mornings, and it continued very much in this condition until the forty-ninth day. During all this time the patient complained of pain in the wrist, pain in the legs, and especially in the left ankle. The joints were swollen slightly, acutely tender, but as time went on both the swelling and the tenderness gradually disappeared, except in the left ankle, where a swelling persisted and the tenderness remained acute. Repeated examination of the chest, of the abdomen, and the pelvis failed to elicit any cause for her temperature—the serous effusion round the ankle-joint not being sufficient to account for such an irregular temperature. On the fiftieth day a slight tenderness and swelling was noticed over the back of the sacrum, and on the next day the swelling had increased considerably; an incision was made into it, and a large quantity of pus let out. Her temperature fell the next day to normal.

Her recovery from this time onwards, though *very slow*, was steady. Massage to the left leg and ankle helped her to gradually recover the use of the leg, and for a week before she was discharged to the convalescent home she was able, with some assistance, to put her foot to the ground and hobble about.

This, with the case of Mrs. D. (Case x), are both examples of infection in which quite late in the course of the disease a local abscess forms, the opening of which seems to put an end to the invasion of the tissues by the germs, and to allow of the immunity which they gradually acquire to take effect.

CASE IX.

Mrs. T., aged 28. Delivered at her home on October 31st, at 10 a.m. Fifth pregnancy. The nurse arrived at 8.30; membranes ruptured 9.15; some difficulty in delivery from the size of the head and shoulders. Baby was asphyxiated, and while it was being attended to the placenta was expelled, not intact. After the third stage rather more than the normal loss. On November 2nd temperature was 101° and pulse 120 when the nurse visited her; the bowels had not been moved, and an enema was given. On November 3rd temperature was still up, and she was admitted to Sparkhill at 7 p.m., with a temperature of 102.6°; pulse, 132. Two intrauterine swabs were taken and sent to Dr. Mackey. Cultures showed streptococci, and a vaccine was prepared. For two days after admission her temperature came down to nearly normal, but a smelling, purulent, bloody discharge persisted, so on the fourth day after admission a blunt curetting was done, and a largish piece of septic placenta was removed; her temperature rose to 102.5° on the same evening. The next morning she had an injection of vaccine, 2 minims—that was on the second morning. Temperature kept up till the fourth morning, when it began to fall, and fell in twenty-four hours to normal, and kept so for two days. Sixth day, injection of vaccine, 3 minims. On the seventh day temperature rose to 101°, and remained irregular, up and down, until the thirteenth day. On the tenth day, up to which she had looked and felt well, she complained of pain in the left side of the chest; on examination of her chest I could find slight impairment of the breath sounds at both bases, and diminished movement of the left side of the chest. Pain passed off, and the patient seemed well till the twenty-first day, when she complained again of pain in the left side in the lower axillary region and in the left shoulder, especially marked at end of inspiration. On the twenty-first day, that is, November 27th, she was examined by Dr. Mackey. Movement of left chest much diminished, resonance impaired in front and duller still behind, especially at the base, where the breath sounds were very weak, but breathing not bronchial, though expiration heard better than inspiration. Vocal resonance resembles aegophony, and there is whispering pectoriloquy. No pleural friction heard. Right side normal. On November 28th, or twenty-second day, 6 minims of vaccine, but her temperature remained irregular, between 99.5° and 102°. On December 3rd, the dullness being more marked and increasing, the chest was aspirated; no fluid found. On December 7th aspirated again, and found fluid, and drew off 2 pints of straw-coloured, slightly thickened fluid, after which, from the 6th to the 16th, her temperature was still up at night and down in the morning, varying from normal to 100° and 100.5°. The aspirator was used again on the 16th, and between 3 and 4 oz. more of fluid were drawn off. The fluid contained chains of streptococci similar to those of the uterus. Injections of vaccine on December 2nd, 7th, 12th, and 19th were given, increasing the dose by 1 minim each time, but with no effect on the temperature until after the second aspiration, after which her temperature rose twice, on the 18th and 19th, to over 100°, but afterwards remained normal till December 31st, when she went home feeling quite well, and has remained so. On December 30th Dr. Mackey reported left chest somewhat dull, air entry poor, but breath sounds better heard than formerly, and vocal resonance good. Aspiration in two places, no fluid. The patient all along looked fairly well in spite of her high temperature and quick pulse and effusion into the pleura.

CASE X.

Mrs. D., aged 31. Eighth pregnancy. Admitted January 21st, 1912, to the Maternity Hospital, and confined in the evening of the same day. Before admission she was examined by a midwife and by a doctor. Presentation transverse. On the 20th, at 1 p.m., the membranes ruptured, but no pain; at 11 p.m. a limb presented, and the doctor who was called in sent her to the maternity hospital. She was admitted at 4 a.m. on the 21st. Examination on admission showed an arm presenting; there were no pains, and at 6 o'clock in the morning Dr. Potts did internal version, bringing down a leg. The patient had no more pain till 5 p.m., when sharp, rapid pains came on and the baby was quickly born; placenta delivered in half an hour (manually). An intrauterine douche was given. At the end of labour the pulse was 86. There was no tear of the perineum.

January 22nd. Pulse 96; temperature 100.5° F. Patient complained of pain in the right wrist. Vaginal douche twice a day.

On the next day the temperature was higher—over 101°; and the next day it went up to 103°, and she complained of great pain in the right wrist and both legs. No swelling on the joints, which appeared freely movable. Very wheezy in the chest, harsh breath sounds all over the lungs; lochia offensive and scanty. The next day temperature 102°. An intrauterine douche was given, cultures taken from the uterus, and Dr. Thomas Wilson curetted her. A great deal of clot and débris came away. The same night 20 c.cm. polyvalent antistreptococcic serum given in the abdominal wall. The next day the patient seemed a little better, but still had pain in the wrist and the legs. The gauze packing of the curetting was removed and a douche given. Cultures grown showed streptococci.

Two days later, on January 25th, temperature still up to 102°, lochia still offensive, two rigors in the morning; uterus flushed with 5 per cent. hydrogen peroxide.

January 27th. Much the same, cough more troublesome, at left base behind the percussion note is impaired, few crepitations and a pleuritic rub can be heard sometimes.

January 28th. Condition the same, abdomen rather distended but no tenderness, uterine discharge clear, sputum shows pneumococcus. The patient had two rigors yesterday.

January 30th. The patient still holding her own, moist crepitations, pleural friction over the left base. Slight rigor this morning.

January 31st. The patient's aspect not so good, pulse becoming more rapid, abdominal distension increasing.

February 1st. Still a good deal of distension, tenderness in the pelvis, sputum bloodstained, and a tender spot over the left buttock.

February 4th. The patient had a rigor yesterday afternoon, temperature 104.8°, still feeling the effect of it to-day.

February 5th. Condition much the same, left base still dull, breath sounds deficient, abdomen not tender, and the spot on the left buttock less so.

February 6th. An abscess in the left buttock was opened, and 4 oz. of thick pus let out. Cultures of pus showed streptococci and *Bacillus coli*. Left base still dull.

Patient continued about the same, and examination on February 12th showed that the uterus was involuted and no hardness or tenderness in either fornix, breath sounds rather deficient in the left base, nothing else abnormal.

During the next week she had several rigors, and on February 19th she complained of pains in the right leg below the knee, leg tender to the touch, and looking larger than the other.

February 23rd. Leg rather better, otherwise much the same. All this time her temperature was going up and down between 103° and normal.

February 27th. The patient was given Burney Yeo's inhaler with creosote inhalation.

February 28th. Half grain collargol injected into basilic vein; left base behind still dull, breath sounds deficient.

February 29th. Condition much improved, temperature having been practically below 100° for three days.

From now till her discharge a month later, on March 28th, the collargol was systematically administered. The patient progressed almost imperceptibly at first, but afterwards steadily and rapidly, and when she left to go to the convalescent home she was able to walk, and the wound in the back had quite healed.

Case xi.

Mrs. C., aged 26. First confinement. Patient generally septic. Confined on April 16th, 1911; attended by a midwife, who, as the labour proved difficult, called in Dr. Norton, and with great difficulty she was delivered with forceps. She remained for six days quite well, but on the seventh day she felt ill, hot, and feverish, and on the eighth day she had a rigor and remained in a condition of fever, with several rigors occurring, until admitted on April 28th—that is, the thirteenth day after confinement.

On admission temperature was 103°, abdomen tender, uterus tender with some thickening around it. Patient was nursed, bowels were kept open, and her temperature coming down gradually the first few days I hoped that the induration around the uterus and the cellulitis would absorb of itself, but in the next six days her temperature went gradually up again to 103.5°. I operated on May 9th, making an incision into the cellulitis deposit per vaginam, opening two small collections of pus and draining them. The uterus was explored, and swabs taken for culture and possibly vaccine preparation. For the next six and a half weeks her temperature was up every evening and down every morning up to anything between 99.5° and 102° and down in the morning to normal, sometimes subnormal. The cultures showed pure streptococcus. She had vaccines every fourth day, but that seemed to have no effect upon the fever. The patient's general condition improved a little at first and then remained stationary; all this time she expressed herself as feeling well and free from pain though so weak that she could not sit up in bed. In the seventh week, the rise of temperature at night becoming higher, I made more frequent examinations, and on the forty-sixth day I opened another small abscess behind the uterus. The temperature fell after this, but there was still some evening rise; but gradually she became nearer and nearer to normal, and in another three weeks she was put to sleep out of doors in the garden. For seven more weeks she lay there looking better, feeling better, her temperature up to 99° sometimes at night but normal in the morning, but so weak still that it was impossible for her to get up, and in spite of her feeling and looking better there was no gain in weight, she having become and remaining extremely emaciated. About the middle of August her temperature rose again three or four times in a week to over 101°, and as I was away on my holiday Mr. Hewetson saw her for me, and found some induration in the right groin. He opened this, letting out some pus, on August 24th. Her temperature at once became normal, and remained so for the five more weeks that she remained in hospital.

Her recovery after this was steady, but extremely slow, and even when she left the hospital she was a thin, pale, anxious-looking woman. I saw her a month ago looking and feeling very well. Duration of stay in hospital, five months.

Case xii.

Mrs. L., aged 32, six children. Prematurely confined on February 16th, 1911, attended by a neighbour. On the third day was taken ill with shivers, and, getting worse, Dr. Petrie was sent for on February 22nd, and I saw her with him on February 23rd.

Patient was wandering, and in a state of acute sepsis; temperature, 103.3°; sordes on the lips; dry, furred tongue; abdomen tender, but not distended; pulse over 140. At the time I did not expect her to live twenty-four hours, and hesitated about moving her to the hospital for fear that she should die on the way. She had two more rigors in the first twenty-four hours after admission, and an injection of antistreptococcic serum was given, while intrauterine swabs were taken for the purpose of examination and preparation of vaccine. On the third day after admission she had 6 minims of her own vaccine (30 million), and subsequently she had an injection of vaccine every third or fourth day for the next fortnight; but as the rigors persisted and her temperature rose most days to 104° or 105°, and sometimes to 106°, the vaccine treatment was stopped. The cultures made from swabs showed pure streptococci. In the third week she had a rigor every day, her temperature on two occasions going off the chart up to 108.4°. On two other occasions it was up to 106° and 108° respectively. After the vaccine treatment was suspended blood cultures were made, and proved to be sterile. The patient was never completely conscious, and her death was expected every day, but in the fourth week she improved a very little; she only had three rigors, and for two and a half days her temperature was normal. The fifth week she had two rigors, but her temperature on the whole higher, rising on four occasions above 102°, and the patient became more and more prostrate. At the end of the sixth week she began to cough, and her breathing was more laboured. An examination of the chest revealed no definite pneumonia, no definite area of dullness, moist breath sounds. The condition of the lungs did not get any worse, but the patient gradually got weaker and weaker, and died on April 7th.

Post-mortem Examination.—Body well developed. Very anaemic. Abdomen: No peritonitis, though there are some shaggy tags on the caecum and lower end of ileum, as if there had long ago been some local peritonitis; uterus, etc., free and apparently normal; no pelvic cellulitis nor phlebitis. In the interior of the uterus a small projection like the top of a small mushroom from the centre of the fundus covered with a yellow purulent exudate. Liver large, normal colour, no abscesses; kidneys large, pale, subacute parenchymatous nephritis; spleen enlarged. Thorax: No pleural effusion and no adhesions, some yellow lymph on both lungs; lungs infiltrated throughout with nodules as large as small marbles, most of these on section are abscesses and full of dirty pus, some of them are reddish and solid; evidently a septic bronchopneumonia showing infected areas in various stages; the lung between the nodules is singularly unaffected and practically normal; there is no pus in the bronchi, and none of the abscesses appear to actually communicate with a bronchus. Pericardium contains 4 oz. of serum; heart is flabby, no valvular disease.

Microscopical Examination.—The mass at the top of uterus is placenta undergoing organization, shows no evidence of acute inflammation, and contains no micro-organisms. The pus from the lung abscesses is crowded with germs of all sorts, and of types usually found in the air passages, so that although the primary lung infection was probably a metastasis, the majority of the abscesses owe their origin to a dissemination by the smaller tubes, and the contact of the air has allowed the infection to become mixed. There are streptococci and Gram-positive diplococci. Gram-negative diplococci like *M. catarrhalis* and short and long Gram-positive diphtheroid germs of all sorts.

From a consideration of these and somewhat similar cases, we learn that even when the temperature has come down to normal, the tongue has cleaned, and all abdominal pain and tenderness have disappeared, unless also the patient gains steadily in strength, puts on weight, and is able to get up, the most careful and continuous care must be taken that any surgical condition, as for example an abscess, will not be overlooked, for in these cases the abscess will form a swelling free from pain, free from tenderness, and free from redness. We learn that on the slightest complaint of any trouble with respiration or any pain in the chest, or with any cough, a careful examination of the chest must be made. We learn that the abscess tends to form in a dependent part of the body, and I think I may add that we learn also that when these surgical conditions supervene during the time that the patient is under vaccine treatment, they are never acute, and if open to surgical treatment are easily cured.

Causation.

When we think of the usual surroundings of the newborn babe, we must be surprised not that there is so much puerperal fever, but that there is not a good deal more. In direct contact with the patient, in direct contact with the doctor's or midwife's hands, in direct contact with any tear or wound that may be inflicted, are, in most of the working-class houses, blankets or sheets or clothes that, even if not describable as dirty, cannot by any stretch of the imagination be called surgically clean. It is surely legitimate to ask why sterilized towels should be placed all round the field of an operation and not around

the field of a delivery, the latter being even more exposed to the risk of infection than the former. We take infinite pains to keep from an operation wound staphylococcus, *Bacillus coli*, *Streptococcus pyogenes*, etc. Do we, can we honestly say that we do, invariably take the same pains to keep them from a cervical or perineal tear in a confinement? The doctor in attendance will invariably tell you that he thoroughly sterilized his hands, that his forceps were boiled, also any sutures and needles that he used, but is there as much attention paid to cleansing the patient as there is to cleansing the doctor's hands? I think it may truly be said that there is not, and, as I shall show you in a few minutes, it is here that the danger lies. Before a difficult forceps case is finished, the hands of the attendant must frequently come into contact with the thighs, vulva, and abdomen of the patient, and although they may be thoroughly sterilized to start with, it is incredible that they remain so to the very end. If we hold the view that puerperal fever is only taken to a case from a previous one, that the causative germ comes into the room on the attendant's hands or instruments, and is not present on or in the patient, then the ordinary method of procedure would be sufficient; but let us examine this causative germ for a few minutes.

I give here the results of the bacteriological examination of the uterine discharge as shown in cultures or cultures and films in 21 cases of puerperal fever, nearly all of which have been under my own care:

1. Pure *Bacillus coli* in cultures and films.
2. Cultures showed pure streptococcus and a few colonies of *Staphylococcus aureus*, sputum crowded with streptococci.
3. Streptococcus and diphtheroid bacillus.
4, 5, and 6. Pure growth of streptococcus in cultures.
7. Cultures showed streptococci and *Bacillus coli* mixed.
8. Profuse and pure culture of *Staphylococcus albus*.
9. Cultures showed *Staphylococcus aureus*. Some doubt as to this causing puerperal rise of temperature. Three days later pus evacuated from Douglas's pouch; cultures from the pus showed streptococcus and *Bacillus coli*. (This was a case of Mr. Martin's.)
10. Cultures showed streptococcus and diphtheroid bacillus, *Bacillus coli* and *Staphyloccus albus*. The swabs were probably contaminated from the vagina. (This was a case of Dr. Edge's that died on the fourth day of peritonitis.)
12. Pure growth of streptococcus in cultures.
13. Pure growth of streptococcus in cultures, also from the pus of a secondary abscess.
14. Cultures showed profuse *Bacillus coli* and few streptococci.
15. Pure growth of streptococcus in cultures.
16. Pure growth of streptococcus in cultures, also from the fluid taken from the pleura.
17. A fine colony of streptococci, but not the same as the streptococci in the other puerperal cases.
18. Few *Bacillus coli*, but chiefly a Gram-negative bacillus in tiny colonies.
19, 20, and 21. Pure growth of streptococcus in cultures.

Dr. Mackey, who has done all the bacteriological investigations, tells me that the streptococcus which is present in 17 of the 21 cases is quite distinct from other streptococci, is the same identically in all these 17, and that in any secondary pus, pleuritic fluid, or sputum, it was identical with that found in the uterine discharge. He also tells me that he has never found it in any other septic cases, and only once has he seen it apart from these puerperal cases, and that was in the cerebro-spinal fluid of a chorea gravidarum.

We suggest that it might be called the *Streptococcus puerperalis*.

Characters of Streptococcus Puerperalis.

It grows freely upon agar, producing opaque colonies which are much larger than any other streptococci; so much so, that after forty-eight hours the colonies might easily be mistaken for those of *Staphylococcus albus*; in broth it produces chains of moderate length, which have little tendency to form clumps or entanglements. Its fermentation tests are as follows: It produces acid and clot in milk, acid in lactose, in glucose, saccharose, and salicin, no change in raffinose, mannite, and inulin. These reactions show that it differs from the *Streptococcus faecalis* in its action to mannite, and from the *Streptococcus pyogenes* by its production of clot in milk. Since this definite streptococcus has been found on bacteriological examination in the uterine discharge in 17 out of 21 cases—that is, in 80 per cent. of the cases—we have a *prima facie* right in assuming that this is the most frequent cause of puerperal fever. It must not, at the same time, be forgotten that cases have been shown to be due to infection by *Bacillus coli*, *Staphylococcus aureus*, and other kinds of streptococci. Since this *Streptococcus puerperalis* is found nowhere practically but in these puerperal cases, it would be foolish to think that doctors or midwives convey the infection to the patient, it would be still more foolish to think that the infection cannot be conveyed from one patient to another. This sounds paradoxical, but it is well known to you that puerperal fever does, and will, occur in isolated cases. A doctor will for a long time be free from a case, then he gets one, and possibly after another very long interval he will get another. If one follow the other closely, if while attending the first the second were infected, it is possible that he might have conveyed the infection from one to the other, but in isolated cases where does the infection come from? A simple explanation, and one that requires, and will get, for its proof or otherwise further investigation, is that this streptococcus, like the *Streptococcus faecalis*, is present in the contents of the bowel, and that the puerperal woman is very susceptible to its action. Efforts will be made to discover and isolate this germ from the faeces. Its presence in the bowel will explain everything, including those cases in which, in spite of many precautions, fever occurs.

In three of the cases reported it was associated with *Bacillus coli*, and it is not difficult to understand how easily the puerperal uterus becomes infected from the rectum. Even the separating bridge of the perineum may be absent at the end of a confinement, so that the passage of the streptococcus from the rectum to the uterus is actually facilitated. That perineal and rectal operations are not followed by infection by this streptococcus we may look upon as due to the fact that all such operation wounds, when there is a possibility of discharge collecting, are drained.

Now it is obvious to everyone that after the confinement is over, the cavity of the uterus, if there is the slightest fault in involution, will remain as an inert bag containing more or less blood clot and serum. Here we have a ready soil in which these streptococci can multiply, a soil, too, that is in direct contact with a surface immediately ready for absorption. This explanation then, although not fully proved, explains both the occasional sporadic nature of the case and also the facility with which one puerperal case will infect another.

Treatment.

Preventive.—There can be little doubt as to the lines that should be followed in order to keep patients free from puerperal fever.

It may be recalled that the *Streptococcus puerperalis* was associated three times with the *Bacillus coli*, the *Bacillus coli* was found alone in one case, a profuse growth of *Bacillus coli* with a few streptococci occurred in another, the *Staphylococcus aureus* in yet another, and lastly, a fine colony of streptococci, unlike the *Streptococcus puerperalis* in another. Bearing these facts in mind, and also the theory that the *Streptococcus puerperalis* is present in the bowel, it will be recognized by all that absolute surgical cleanliness, not only of hands and of instruments, is essential, but equally essential is the absolute surgical cleanliness of the patient's skin. The whole area of the field of delivery should be thoroughly cleaned—the thighs, the vulva, and the abdomen—the hair should be clipped quite short, and if any obstetric operation has to be performed, I think it would be better to shave it off.

Since at the beginning of labour an enema is given to ensure as far as possible that the rectum shall be empty during the delivery of the baby, it follows that the neighbourhood of the anus has recently been infected by contact with the contents of the bowel. It is our especial duty to pay greater attention than we have done to cleansing the region of the anus. However well the rectum is emptied it usually happens that more or less of the bowel contents are expelled in the last part of the second stage of labour. It is wise to have a bowl of solution of mercury biniodide (1 in 1,000) close at hand with some biggish pieces of absorbent wool in it, and as any faecal matter escapes wipe it away thoroughly from front to back with the solution; thus will any possible infection be carried away from the vaginal opening. Care should be taken not to soil one's fingers in doing so—to be successful in this the pieces of

wool should be of large size. Always wear a sterilized gown, and take three or four sterilized towels to place under the patient and over the edges of the turned-up patient's clothes and turned down bedclothes. If there is a nurse in charge beforehand she can prepare the sterilized towels before the stage of labour at which they will be required is reached. We must cleanse our hands before we start cleansing the patient, and after cleaning the patient we must clean our own hands again, and then put on the gown and place our towels ready in position. Some of you will at this stage put on rubber gloves that have been boiled, others will not. If a man has absolute faith in the power he has of sterilizing his hands he may or may not wear gloves; if he has not this faith, then the wearing of gloves or not will make no difference; for in midwifery work above all other it frequently happens that a hole may be torn in the glove, and unless the hand inside it is absolutely sterile the glove will have been useless.

To my mind, the great advantage of rubber gloves in surgical work is that you can by their means protect your hands from sources of infection. The method that will be used for cleansing the skin of the patient you must decide for yourselves. Personally I am a great believer in thorough scrubbing with a sterilized loofah with soap and hot water, followed by vigorous rubbing with a dry, sterilized towel, then a thorough rubbing with methylated spirits, to be followed finally by rubbing with a solution of mercury biniodide (1 in 500) in 75 per cent. of methylated spirits. I think I am right in saying that Mr. Leedham Green's experiments on sterilizing the hands have shown that this method gives the best results.

After what I have said, is there anything else that we can think of that will help in the prevention of puerperal fever?

I do not think it is a dream impossible of fulfilment that every woman at the commencement of labour shall have an injection of the vaccine of a *Streptococcus puerperalis*, thus rendering her immune beforehand to the infection by this germ. This, at any rate, would render her immune in 70 or 80 per cent. of the cases. Further consideration even might lead an enthusiast to inject also a vaccine prepared from the *Bacillus coli*.

It may be said that this elaborate method of sterilized gowns and towels, rubber gloves, and even more, stock vaccines, will involve such an expense that the extremely moderate fee that is received by the practitioner for attending a woman at the most critical period of her life is insufficient to justify one in incurring it. Surely the occurrence of one case of puerperal fever will involve such an expenditure of brain power and of time that this very moderate expenditure in every case is to my mind not only justified but essential. I speak now of the expenditure on the methods of sterilization, and not of the expenditure on stock vaccines. As I have already hinted, this preliminary injection of stock vaccines may be only a dream of mine which may or may not be fulfilled.

Before we leave the question of preventive treatment I may add, although it is hardly necessary to do so, the importance of impressing upon the patient beforehand the importance of a clean, well-aired room, of clean blankets, and clean sheets. If possible, too, the patient should have a good warm bath before labour begins, or as it begins.

Treatment of the Fever when the Temperature Rises.

When the first rise of temperature is in the first forty-eight hours and is only a slight one, up to or just over 100°, when there is no great rise in the pulse-rate, and the patient does not feel very ill, the best thing to do is to wash out the uterus with an antiseptic solution, seeing to it carefully that all the apparatus used is scrupulously clean. In many cases the temperature will fall the next morning and never rise again. If the rise in temperature over 100° persists over two days, or occurs a second time, we must conclude that there is fever more or less severe.

It would be a very good thing if every case of puerperal fever were immediately notified to the medical officer of health, and then institutional treatment will be available for those who cannot possibly afford suitable treatment at home. The majority of these latter will probably be the midwives' cases to which, when the temperature rises, the doctor has been called in. Those who can afford suitable treatment can be immediately treated at home; but immediate notification means immediate treatment for those who cannot so afford it. The number of cases at present notified to the medical officer of health in this city is only a small proportion of the cases that occur. In fact, it is actually less than the number admitted to the ward at Sparkhill.

For any treatment to have a chance of success it must be started early in the disease. What I would advise is this: That the patient be placed on her left side with the knees drawn up, that the doctor, wearing sterilized rubber gloves to protect his own hands from infection, should pass a duck-bill speculum and swab out the vagina with a mild antiseptic solution by bits of wool held in a vulsellum forceps. Having done this he should catch hold of the anterior lip of the cervix with the vulsellum forceps, and pull the uterus a little downwards and forwards so as to expose the external os; a second person will, of course, hold the speculum, and then the doctor, holding the forceps in the right hand, will take a sterilized swab such as I show here, and, taking great care that it does not touch any of the parts on the way, will push it through the os into the interior of the uterus, will draw it out with equal care, and immediately cork it tightly in a sterilized test tube. By bacteriological examination of this swab he has a certain means of ascertaining the nature of the infection. He should then by manual examination try to satisfy himself that the interior of the uterus is clear of any retained placenta or membranes. If there is any doubt of this, holding the cervix as before in the vulsellum forceps, he can pass a blunt curette into the uterus and run it over the whole of the inner surface of the uterus, then swab out the interior with a piece of wool either on a wooden probe or held on long forceps and dipped in the dilute solution of mercury biniodide, and finally insert into the uterus a strip of iodoform gauze to act as a drain. Following on this I think it would be advisable to give the patient an injection of vaccine containing 25 or 30 million of the *Streptococcus puerperalis*.

I do not doubt that very shortly stock vaccines will be prepared from this streptococcus and will be placed on the market.

Believing as I do in the efficacy of a vaccine prepared from the source of the patient's infection, what I may call the patient's own vaccine, I would advise that whenever the patient can afford it, one should be prepared, and an injection of it given as soon as possible. The question of expense must enter into this treatment; the preparation of vaccine involves several hours' work, and can only be done with absolute safety either by or under the immediate supervision of a skilled bacteriologist, and such services must be paid for.

I think I may claim from some of the results in the treatment by this method that I am justified in asking for its adoption. I quoted three severe cases where this treatment was applied early with complete success, and even in those prolonged, drawn-out cases in which the vaccine did not appear to have an immediate curative effect. I would point out that when what I call a surgical condition, such as the formation of an abscess, appeared, it was only accompanied by a slight irregular temperature, by no fresh general septic condition of the patient, and after the abscess was opened the recovery was immediate and complete; whereas, in cases which did not have the vaccine treatment, any fresh surgical condition was accompanied by an increase in the general septic condition of the patient, leading ultimately to a fatal end.

I do not claim for one minute that, if the patient has been profoundly infected by the toxins of these streptococci, and if the infection has been prolonged for some time, it is possible to bring about immunity and recovery by the injection of vaccines; but what I do ask that we should all aim at is that the patient should be given a chance of becoming immune to the infection before her powers of resistance have been too far overcome by the degree and the duration of the infection.

I would like to add here one or two other examples of treatment by this method. Let me give you a case that has come under my care after most of this lecture was written:

CASE XIII.

Mrs. J., aged 25. Confined April 8th, normal confinement, primipara. Had a rigor April 9th, temperature 104.2°. Admitted to the hospital on April 11th. On admission in the night I was rung up by the matron, who told me that the patient was so ill that she did not think she would live till the

morning. I ordered stock vaccine—30 million of the *Streptococcus puerperalis*. When I saw her the next morning her temperature had begun to go down; she was delirious, trying to get out of bed, picking at the bedclothes, dry and almost black tongue, sordes on her lips, pulse that I could hardly count and very feeble, uterus big and tender, abdomen slightly distended and tender, no tear in the perineum. I took swabs of the interior of the uterus. Dr. Mackey reported an infection of a *Streptococcus puerperalis* and *Bacillus coli*. During that day her temperature fell to 101°, but went up again the next day to 104.8°, and she had two rigors. Her temperature remained up until the third day after admission, when she had a dose of her own vaccine, 4 minims, containing 20 million streptococci and 100 million *Bacillus coli*. Her temperature came down rapidly to normal, and has never risen again. Although it was some days before she became quite clear in her mind and before her tongue became clean and moist, she had a second dose of her own vaccine four days later of 25 million streptococci and 120 million *Bacillus coli*. Her temperature remained normal, but on May 5th I noticed a small swelling at the back of the right buttock. The next day I found that this was larger and fluctuating, and under a local anaesthetic I opened it and let out about 1 oz. of pus, there being no rise of temperature; and by this time the patient, who had had altogether four doses of her own vaccine, was expressing herself as feeling very well and anxious to get up. Under ordinary circumstances I would certainly have said when I first saw her that this patient had not a chance of recovery.

Showing the advantage of treatment by the patient's own vaccine as compared with stock vaccine, there is the case of

CASE XIV.

Mrs. T., aged 36. Confined by a midwife; fairly profuse *post-partum* haemorrhage; on second, third, and fourth days had rigors; on the fifth she was seen by Dr. Barber and by myself; temperature 103.6°; in acute septic condition. Admitted to the hospital the next day, and the usual treatment was followed out. Dr. Mackey's report showed that infection was due to *Bacillus coli*, but chiefly to a Gram-negative bacillus in tiny colonies smaller than the streptococcic colonies, which I think I am right in saying that Dr. Mackey said he had never seen before. Her temperature was irregular for the first nine days after admission, but usually varying from 101° to 103°. After the second dose of her own vaccine on the ninth day, containing 60 million *Bacillus coli* and 15 million of the other bacillus, her temperature came down steadily, and, although it subsequently rose twice to 101, her recovery was continuous and complete.

CASE XV.

A second case, also showing the advantage of her own vaccine, was that of Mrs. P., who was admitted on the fourteenth day after her confinement with all the symptoms of puerperal fever. Cultures showed streptococcus and a few colonies of *Staphylococcus aureus*. On admission she had a bad cough, there were crepitations behind the left apex, and the sputum was crowded with the same streptococci. She had one dose of her own vaccine, containing 20 million streptococci and 200 million staphylococci; her temperature came down to normal and never rose again.

In addition to this treatment by vaccines, none of the ordinary methods of treatment should, if indicated, be neglected; intrauterine douching with dilute antiseptics, iodoform pencils in the vagina if the discharge is offensive, tonics, careful attention to the bowels, and, when necessary, stimulants.

As I have said, I chose the subject because I thought it was one of interest to the majority of medical men. I may say now that I chose it also because I was anxious to impress upon you the possible advantage that your patients may derive from your knowledge of this vaccine treatment. I may have formed my conclusions too hastily, and you may say that they are not warranted by the number of cases investigated. I can only say now that I am going on with these investigations, and further results will be published when they are ready. I chose this subject, too, because it has always seemed to me that the death of a woman in childbirth from puerperal fever is a matter of reproach to the medical profession, and any possible advantage in treatment that may be derived from investigations into all aspects of the disease should be, and will be, I am sure, heartily welcomed by the profession.

Before I close I would appeal to the Central Midwives Board to extend the duration of the course of training for midwives to at least six months. At present it is four months, and, when one thinks of what has to be learnt, this time hardly seems long enough. I would appeal to the doctors to notify their cases immediately, so that the really poor may get institutional treatment as early as possible. I would congratulate the Faculty of Medicine here on the near approach of the time when their students will receive part of their instruction in midwifery in a maternity hospital.

I would express my consciousness of the inadequacies of my lecture; any little merit that there may be in it I owe almost entirely to our bacteriologist, Dr. Mackey. To him I give my deepest thanks. I have also to thank, and I do it with pleasure, my colleagues on the staffs of the Women's and Maternity Hospitals.

THE ETIOLOGY OF TORSION OF THE TESTIS.

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MY attention has been directed lately to torsion of the testicle, and without making by any means an exhaustive inquiry, I have endeavoured to learn what I could regarding the etiology of this remarkable complaint.

The liability of an undescended testicle to become suddenly and acutely inflamed was well known to surgeons of old, and, though often unaccounted for, was usually attributed to a blow or a strain.

The chief interest then, as now, was in distinguishing between an inflamed inguinal testicle and a piece of strangulated gut. Percival Pott mentions the case of a young man in whom inflammation of an undescended testicle caused symptoms closely resembling those of a hernia strangulated. The local tenderness was extreme, spread to the abdomen, and was associated with vomiting. It was noticed that the testicle on this side was not in the scrotum. Fomentations were applied and the patient recovered without an operation.

Sir Astley Cooper, in his work, *The Testis*, and Samuel Cooper, in his *Surgical Dictionary*, 1823, both draw attention to the fact that there may be considerable difficulty in distinguishing between an inflamed testicle in the inguinal canal and a strangulated knuckle of bowel. However, the older surgeons had little opportunity of studying the pathology of the living, for until well beyond the middle of the nineteenth century operative interference was confined to minor cases or to those of extreme emergency. Even when strangulation of the bowel occurred operation was invariably postponed until all other measures for obtaining relief had been tried and failed; and as thrombosis due to torsion of the cord, even when unrelieved, very rarely ends fatally, there was in those days no opportunity of determining the cause of the trouble. However, with the dawn of antiseptic surgery more light was thrown upon many obscure problems, for there was much less hesitation in making an exploratory incision. Still, many years passed before it was proved that torsion of the cord or testis was the essential cause of spontaneous inguinal orchitis. Mr. Jacobson, in his admirable article on diseases of the male organs of generation in Holmes's *System of Surgery*, describes the case of a lad 19 years of age, in whom inflammation of an inguinal testis produced symptoms simulating those of strangulated hernia.

The lad came to Mr. Jacobson's out-patient clinic in November, 1879, and was admitted with a view to operation. An incision over the swelling disclosed a gangrenous testicle, and an adjacent black, cyst-like mass was found to be epididymis, with above this the reddish, pulpy, oedematous cord. The cord was divided after being ligatured, and the affected parts removed.

In this case the symptoms had originated without any apparent cause, and in the light of our present knowledge there can be no doubt, though no mention was made of the fact, that it was an instance of thrombosis and gangrene following upon torsion of the cord.

So far as I have been able to ascertain, the first surgeon to describe torsion of the testicle was Professor C. Nicoladini. In the *Archiv für klinische Chirurgie*, 1885, he relates the two following cases:

A man, 62 years of age, was operated upon by Professor Nicoladini in June, 1882, on account of a painful swelling of the right side of the scrotum. The swelling was of recent origin and could not be accounted for. The right side of the scrotum was considerably swollen. It was oedematous, painful, and fluctuated. It was thought suppuration had occurred. On making an incision bloodstained fluid escaped, followed by a testicle and epididymis, which were of a dark plum colour, and at first sight thought to be a piece of strangulated intestine. Further examination showed that this extreme congestion was due to the spermatic cord being twisted like a screw through more than 180 degrees, thus causing thrombosis of the

vessels beyond. The body of the testicle was one-third of the normal size.

The other case was that of a lad 16 years old. He was first seen by Professor Nicoladini on December 28th, 1883, on account of recurring attacks of pain in a testicle retained in the right inguinal region. The pain was occasionally so acute as to cause vomiting. Rest in bed and ice applied locally would relieve the pain, but he wished to be cured permanently. On January 11th, 1884, an operation was performed. Bloodstained fluid was found in the tunica vaginalis, the testis and epididymis were deeply congested and necrotic, due to a twist of the cord through 180 degrees. The testicle was connected with the epididymis by a long mesorchium. Both testis and epididymis were removed.

The article in which these original and extremely interesting observations are recorded deals with the subject in considerable detail, and the following conclusions are arrived at:

1. An inguinal testis or one late to descend into the scrotum is liable to torsion.
2. A slight degree of torsion may correct itself.
3. In severe degrees of torsion necrosis results.

The first surgeon in this country to describe torsion of the testicle was Mr. Thomas Bryant. In February, 1892, he related the following case before the Royal Medical and Chirurgical Society:

In September, 1889, Mr. Bryant saw a boy, aged 15, who had a swelling in his left groin and scrotum, with symptoms suggestive of strangulated hernia. He was a healthy lad, and two days before Mr. Bryant saw him had retired to bed after a long bicycle ride. "He woke his parents up during the night complaining of pain in his scrotum and left groin." During the next two days the local symptoms increased, and as the boy was in great pain it was decided to operate, though the diagnosis of the case was by no means clear. The soft parts were divided down to the tunica vaginalis, when "a glistening coal-black object came into view, which for the moment was thought might be congested bowel. On opening the vaginal sac and laying open half the inguinal canal, much blood escaped, and it became manifest that the black object which had been noticed was the testicle with its cord gorged with blood. On closer examination, it was found that the cord had been twisted upon its axis in the inguinal canal, and that as a result the testis had become strangulated with the epididymis. Three half twists made inwards completely untwisted the cord. As the testicle was warm and therefore viable, it was replaced into the vaginal sac, and the soft parts sutured together. All symptoms at once disappeared. For several weeks subsequently the testicle and cord remained thickened, but this soon disappeared, and later on the testicle atrophied.

Various explanations have been offered as to how and why the testicle and cord may become twisted, but none of them have so far met with anything approaching general acceptance. There is a general consensus of opinion that the most important predisposing cause is an imperfect development of the organ, the body of the gland being separated from the epididymis by a long mesorchium. Another fact of considerable importance is that in about one half of the recorded cases the symptoms of inflammation occurred at the time of puberty. Mr. Corner, in his work, *Diseases of the Male Generative Organs*, deals with this subject very fully. He says:

By going into the history of the cases there can be no doubt about three things: First, the developmental defect; secondly, the changes of puberty; and, thirdly, some muscular effort, which precipitated the onset of the final attack. Sometimes (30 per cent. of known cases) the onset occurred without any attributable cause; even during sleep in 8 per cent. This does not forbid the action of some muscular effort; for instance, the effort may be so slight as to be unnoticed. A case has been recorded in which a man had an attack of pain whenever he crossed his legs in a peculiar way. This muscular force must be divided into two classes: One concerning movement of the legs, and the other the raising of the abdominal pressure, as in straining or lifting. In the first case the testicle is twisted directly; in the second it is twisted indirectly as the cord is expelled from the abdomen by the effort.

Mr. Corner is of opinion that the final strangulation represents the summation of a series of small twists. As the result of an analysis of a number of cases he furnishes us with the following interesting table, which indicates the relative frequency with which torsion of the testis is met with in various periods of life:

1 to 10 years	20 per cent.
10 to 20 ,, ...	47 ,,
20 to 30 ,, ...	20 ,,
30 to 40 ,, ...	10 ,,
40 to 50 ,, ...	2 ,,
50 to 70 ,, ...	1 ,,

The figures show very clearly that the majority of the cases occur about, or shortly after, the changes in the testicle and spermatic cord which take place at puberty. Therefore these changes are factors in its production.

Mr. R. W. Taylor, in his *Practical Treatise on Genito-urinary Diseases*, says:

The exciting causes of torsion of the cord are in the main excessive labour and violent and sudden strain. . . . The essential underlying cause of torsion is a long mesorchium.

Mr. H. M. Rigby and Mr. R. J. Howard wrote a very interesting paper on torsion of the testis, which appeared in the *Lancet* (vol. i, 1907). The conclusion they came to was that "the predisposing cause is a congenital abnormality of the attachment of the testis to the spermatic cord. The exciting cause is not certainly known."

In the well-known surgical textbook of Rose and Carless it is stated that the cause of torsion of the testicle still remains unknown.

What, then, may be regarded as ascertained facts are:

1. In the majority of cases the testicle was imperfectly developed, a long mesorchium being a striking defect.
2. In the majority of cases the testicle had not descended to the scrotum.
3. The majority of cases occurred in young persons about the age of puberty.
4. In nearly one-half of the recorded cases no definite reason could be given for the torsion occurring. Not infrequently the symptoms occurred whilst the patient was in bed, and in some cases during sleep.
5. In many instances of acute torsion there had been slight recurrent attacks of pain.
6. In every case operated upon, and where careful examination was made, either the testicle was found to be twisted upon the epididymis, or both testicle and epididymis were twisted upon the cord.
7. In every case in which the testicle has been untwisted and replaced atrophy of the organ has resulted.

All surgeons who have expressed an opinion upon the subject agree that a long mesorchium is the chief predisposing cause, and that in a considerable proportion of cases a blow or strain appears to have been the exciting cause.

It has further been suggested that torsion occurs in an imperfectly descended testicle because of the free mobility which such organs are said to possess. Now, however free the mobility of an inguinal testis, it is not to be compared to that of the normally placed organ during infancy and childhood, which can frequently be seen to travel from the bottom of the scrotum up to the inguinal canal. Yet in spite of this considerable excursion I know of no instance of a child or infant in whom a testicle normally developed and normally placed has ever suffered from torsion. If mobility of the organ played an important part in producing torsion, then surely one would expect it to occur with considerable frequency during childhood.

It is commonly believed that muscular effort is a very important factor, but even supposing that a sudden strain did by some means or other twist an inguinal testis, it is hard to believe that any muscular effort could succeed in suddenly twisting the organ through three or more half turns, and this is what has been found in many cases subjected to operation.

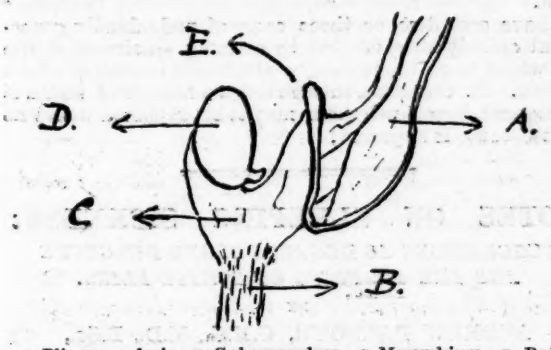
Of course it might be argued that the symptoms calling for operative interference were the summation of many small twists, but to my mind this view fails to carry conviction; besides, even if it be granted that a muscular effort may twist an inguinal testicle, it would only account for a certain number of cases.

A very important fact is that in a large percentage of cases there was no apparent cause at all for the torsion, and in a fair proportion the symptoms occurred during sleep.

It is not as a rule very difficult to criticize adversely the views of others, but it is by no means so easy to offer an alternative explanation which will meet with approval. However, after reviewing what evidence we have, I would suggest the probabilities are that in every case presenting symptoms of torsion of the testicle some degree of torsion of the organ had existed since birth. In other words, torsion of the testicle is of congenital origin and not acquired. I feel confident this is so, and that on this basis all cases can be satisfactorily accounted for.

In nearly every recorded case there has been an imperfect development and an imperfect descent of the testicle, the separation of the body of the organ from the epididymis by a long mesorchium being a constant feature. Now when a testicle so loosely fashioned has to travel from the region of the kidney to the groin, passing through the inguinal canal, it surely is not improbable that during this gubernacular slide some degree of rotation might occur.

The attachment of the gubernaculum to a long mesorchium would certainly add to the probability of torsion occurring during the journey. I have endeavoured to illustrate this in the accompanying diagram.



A, Plica vascularis. B, Gubernaculum. C, Mesorchium. D, Body of testis inverted. E, Epididymis.

When the body of the testicle alone is rotated, or the whole organ twisted upon the cord, the vessels of the mesorchium or of the cord would of necessity be involved; and the more complete the twisting the more precarious would be the vascular supply. If the twist were a slight one—say, merely half a turn—the blood vessels might still be able to deal satisfactorily with a sudden vascular change; but should the twist be one of three or four half turns, then a sudden turgescence of the organ, from whatever cause, would not improbably result in thrombosis.

In the BRITISH MEDICAL JOURNAL, vol. i, 1897, Dr. M. R. Taylor relates a case of torsion of the testis in a newborn child. Nothing abnormal was noticed at the time of birth, but four hours later the nurse noticed that the right testicle was slightly larger than the left, and the skin of the scrotum was discoloured. Two days later the child was given an anaesthetic, and the testicle was removed. It was sent for examination to Mr. C. B. Lockwood, who reported as follows: "The spermatic cord is very thin, and twisted apparently just above the tunica vaginalis. The whole cavity of the tunica vaginalis and the whole testicle and epididymis were full of congested blood. The clot runs ½ in. up the cord as far as the twisted part."

Though the testicle was in the scrotum, this is clearly a case in which intense congestion was due to a congenital twist of the cord, for this is the only reasonable explanation of the clinical symptoms and of the pathological findings. In the case of torsion of an inguinal testis where there is a clear history of a blow or strain, and in which it is believed that the torsion occurred suddenly as the result of the blow or of a muscular effort, it would appear more probable that in such cases some degree of torsion had existed since birth, and that the injury produced a venous engorgement of the organ which, owing to the precarious vascular supply, resulted in thrombosis.

In about 70 per cent. of recorded cases the symptoms have occurred before 20 years of age, and nearly 50 per cent. of them were observed at puberty. It is surely not unreasonable to suppose that, granted some degree of torsion of the vessels supplying the testicle, the sudden vascular changes which are known to take place at this time of life might readily result in excessive congestion and thrombosis. The view I am advocating receives additional support from a fact that in a certain number of cases the trouble originated during sleep. Slight degrees of torsion may be present without producing symptoms, and must have been observed by surgeons when operating for hernia associated with an undescended testicle.

It is of course impossible to advance direct evidence in support of my view, but I would submit that all the circumstantial evidence available makes it appear probable that torsion of the testicle is primarily of congenital origin and not acquired.

ACUTE EPIDIDYMITIS PRODUCED BY MUSCULAR STRAIN.

BY J. W. GEARY GRANT, F.R.C.S.ENG.,
CARDIFF.

I READ with much interest the article in the JOURNAL of April 13th, p. 832, by Dr. Arnold Edwards, describing in a very exhaustive manner two cases which he considers bear out the theory that epididymitis may be caused by strain. The conclusions drawn therefrom are of considerable importance in their medico-legal relations, and are worthy of a somewhat close scrutiny and analysis. For if it be established that a muscular effort or strain can cause epididymitis, then it could quite conceivably follow that so serious a condition as tuberculous testis might owe its origin to the same cause—the sequence being obviously strain, effusion into epididymis, and inflammation upon which tuberculous infection is grafted. I cannot put my hand on the record now, but unless my memory is at fault, I have heard such a case successfully argued in court. From the employer's point of view it is rather a serious position.

I have met with two cases which present considerable similarity to those given with such detail by Dr. Edwards, although I regret that circumstances did not permit of my investigating them so closely as he did, and that the urine was examined in neither.

CASE I.

A. B., aged 39, on Thursday, whilst standing on two joists of a flooring with the feet about 16 in. apart, swung round a plank from the scaffolding, and as he did so "felt a slight sting in the right groin." No squeeze or blow. Pain was felt in groin, not testis; it was so slight that it did not cause him to stop his work, even momentarily. He felt slight soreness in groin, but continued working up to Sunday, when he noticed a swelling in the groin and laid up. On Tuesday the testis commenced to swell. A fortnight ago he got up for two days, but had to return to bed on account of the left testicle swelling.

The globus minor of the right testis was swollen, not hard, and there was evidently an inflammatory condition in process of resolution. The rest of epididymis, body of testis, vas, and cord were perfectly normal.

He never mentioned the condition of the left testis until I observed it for myself. There was a similar swelling of the globus minor of the left epididymis, much firmer and more tender than its fellow. Neither body of testis, vas, or cord was in any way affected. And there can be little doubt that it presented the early stage of the same inflammatory process that was previously existent on the right side. There was no suspicion of any urethral discharge. The urine could not be examined. He was a leading light of his particular religious denomination, and was greatly offended at being asked certain questions, and in fact that he should be examined at all.

I certified the case as one of bilateral epididymitis, cause unknown. But I think that it affords a strong commentary on the inferences that are drawn from the two cases given by Dr. Edwards. Here is a man who meets with "a strain" on Thursday, and all symptoms are latent until Sunday, and only on Tuesday does the epididymis begin to swell. But suppose we admit this doubtful strain as the definite determining cause of the epididymitis on the right side, how can we connect the ensuing attack of epididymitis on the left after a strain in the right groin? Is not the weight of probability that both were due to some general cause—either an unrecognized inflammatory condition in the deep urethra, or a haematogenous infection?

CASE II.

Man, between 20 and 30, dock hobbler, on Wednesday, a fortnight before he came under treatment, as he was finishing work threw down the shute and jumped sideways out of the way; in doing so he felt "a twist on the right side of belly passing round to the groin." The following morning the testicle began to swell, and although he went to work the pain became so severe that he had to give up. The swelling is now subsiding and he has no pain. The globus major of the right epididymis was slightly enlarged and firm in consistence, but was neither stony hard nor craggy in feel. The rest of the testis was normal, as were the vas and cord, and there was no tenderness of the latter either in the scrotum or in the inguinal canal. The orifice of the urethra was perfectly healthy without the suspicion of a discharge. He complained of some tenderness over the lower part of the right side of the abdomen; there was no muscular rigidity. He resumed work in about two weeks after I saw him. No examination of urine was made.

In this case I suggested that in the jump sideways that he made the testicle was squeezed between the thighs or

the thigh and trousers, and there was local trauma that he did not notice. If this be not the explanation, then it is a case which is more suggestive of the origin from strain than any I have seen or read of. It happened as he was finishing work, he went straight home, had pain all the time, and although he made an effort the next morning to go to work, the testis was then swollen and too painful to allow him to continue. This is the sequence I should expect in a true traumatic epididymitis—the immediate onset of pain of some severity, the continuance of pain becoming more acute until the inflammatory process is fully established, and not a latent period of several days without symptoms. In neither of my cases was there any ecchymosis to be made out. This case, I believe, was due to a definite traumatism. The former case I feel just as sure was not.

A few years ago I treated a boy, aged 16 or 17, whose right testis suddenly swelled up in the night. When I saw him the next day body and epididymis formed an indistinguishable mass which was acutely tender, and it resembled a very acute gonorrhoeal epididymitis. I was very doubtful at the time as to whether it was a case of torsion. In a day or two the pain and swelling subsided, but the testis remained permanently atrophied; there was no connexion with mumps to be made out. He had been at gymnasium on the night it came on, but there was no account of any strain whatever. He told me he had no recollection of injuring the testis in any way or of experiencing any pain whilst at the gymnasium. I regret that I took no notes of this case, and merely give it from memory.

The theory of the *coup de fouet* can, I think, be dismissed. The sluggish contraction of the cremaster muscle, when eliciting the cremasteric reflex, and a view of the scattered muscular bands which compose it, when dissecting or performing the radical cure of hernia, will hardly impress one with its powers of striking the testicle a violent blow against the pillars of the ring.

It might be conceivable that in violent straining efforts the blood pressure in the vena cava could be so raised that such veins as those of the pampiniform plexus lying outside the abdomen, and therefore not supported as those are inside, might be ruptured; at the same time, it appears very unlikely. Dr. Edwards's suggestion is that in a violent action of the abdominal muscles the cord is nipped and the veins are compressed by the muscle, whilst the arteries, being more resistant, remain patent, as happens in any form of torsion or strangulation of a viscus. He suggests that the fibres of the rectus do this, but as these are inserted into the pubic and not the iliac crest this is an anatomical impossibility. What Dr. Edwards doubtless means is the action of the arched fibres of the internal oblique and transversalis muscles. Such an action, however, would be so brief, that I find it difficult to believe sufficient congestion could be produced to rupture any of the veins. In one of his cases there was some slight ecchymosis in the groin, but how or why even an extensive haematoma of the cord should cause epididymitis I find it difficult to see. If the bleeding occurred into the epididymis itself then I should expect immediate swelling and pain, which would not pass off rapidly, only to again manifest itself some days later. If it were so slight as not to cause this I cannot see why it should set up inflammation later.

From the very rigorous examination made by Dr. Edwards in his two cases, a urethral origin seems definitely excluded. But can the same be said of a general cause? Dr. Edwards mentions gout, rheumatism, and malaria, but only to dismiss the first two; but orchitis or epididymitis are well known to occur in mumps, typhoid, and other infective diseases, and I have seen epididymitis in pyaemia. I was told the other day of two cases of epididymitis occurring one after the other in members of the same family that were attributed to influenza, and it seems not an improbable assumption that it may occur as the result of a mild infection in some other of these cases of obscure origin quite as probably as from a doubtful trauma.

The one really weak point in Dr. Edwards's two cases and in the first of my two is the delayed onset. The testis, vas, and cord are well supplied with nerves, and are acutely sensitive to any traumatism, and I cannot conceive that such can occur, whether directly or indirectly, without pain of some severity occurring at once and persisting. In my second case this is what happened. The man felt severe pain at once, he left his work, the pain continued to increase, and in the course of twenty-four hours the pain and swelling had fully developed. This, in my opinion, is strongly confirmatory of a traumatic origin. I cannot, however, but think that this was of the nature of a squeeze, and not a strain, and a mistake by the individual as to what exactly happened is quite conceivable.

The idea of strain as a cause is so difficult to imagine as being effective that I should prefer to assume some other unrecognized general condition of the nature of a mild infective process in the other, and that the supposed injury did not stand in the relation of cause and effect.

I have seen two or three cases of undoubtedly gonorrhoeal epididymitis, verified by staining specimens of the pus, which were unblushingly attributed to strains whilst at work. If, therefore, in such cases a history of strain is so frequent, how much more may it be expected where no obvious cause is apparent!

NOTES ON SLEEPING SICKNESS:

SUGGESTIONS AS REGARDS GLAND PUNCTURE AND THE TRAPPING OF TSETSE FLIES.

BY

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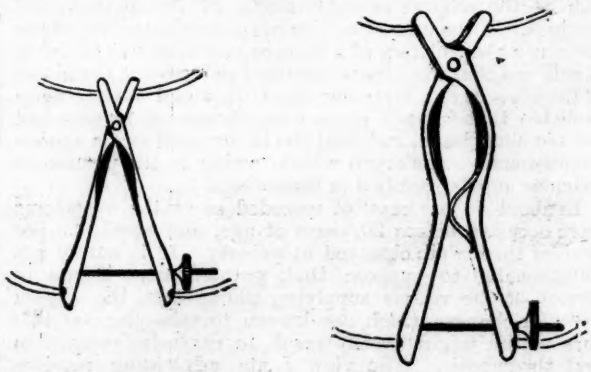
HAVING just returned from a visit to the Lado district of Mongalla Province in the far southern Sudan, whither, as a member of the Sudan Sleeping Sickness Commission, I accompanied the President, Colonel H. B. Mathias, D.S.O., I would like to direct attention to two points, one of minor interest, the other having an important bearing on the question of prophylaxis.

1. *A Gland Holder.*

I have frequently found that the little operation of gland puncture is by no means so easily performed as might be imagined. This is specially true when one is working unaided and when the suspected glands, though enlarged, are small and comparatively hard. It is frequently difficult to fix the gland, none too easy to pierce its capsule, while sometimes one is apt, when exercising the necessary force, to run the needle right through it, possibly to the danger of one's own finger. Difficulty or failure is all the more exasperating when, as is usually the case, the patient's skin is greasy and slippery, the operator's fingers are in like condition, he himself is bathed in perspiration and worried by flies, and the needle is none too sharp.

It has occurred to me that a little instrument, which may be termed a gland holder or a gland fixer, would be useful. I hope when in London to have one made for me, but the accompanying sketches, for which I am indebted



Two types of proposed gland fixer.

to Mr. George Buchanan, will give an idea of the kind of thing which I think might serve the purpose. It will be seen that, in one form, that intended for a large gland or a mass of glands, it consists of two central curved blades the edges of which can be protected by rubber or leather, and which are intended to close in behind the gland and the skin covering it, thus isolating the gland and obviating any danger to the operator's fingers, or the risk of making two holes instead of one in the patient's skin. The blades

are operated by short handles, the degree of pressure exerted being controlled either by a catch system or a screw. The latter is shown here.

Tapes are attached to the distal extremities of these handles, and they can be carried round the neck and tied together. In order to make the fixation more complete a couple of short metal processes project from the other extremities of the central blades, and are also furnished with tapes. The other form differs only in the central blades being straight, and is not unlike a pair of nut-crackers. It would probably be more generally useful. With this little instrument in position the operator will have both hands free, and should not have to dig more than once at the gland. Aspiration will be easy, and if the first trial is not successful the gland is still there ready for number two.

I have had a rough model made in the Gordon College workshops, and, though not exactly like the instrument it is intended to represent, its use indicates that the latter would be likely to serve the purpose for which it is intended. I fear there may be parts of the neck where it cannot be used, but it could be employed in most situations, and I am inclined to think will fill a want.

2. *Fly Traps.*

Any one who has visited a sleeping sickness area, or indeed any one conversant with the recent literature on the subject, must, I think, have been driven to the conclusion that the crux of the whole matter, so far as prophylaxis is concerned, rests with the destruction of the tsetse fly. The fact that a special entomological commission is proceeding to Rhodesia for the express purpose of increasing our knowledge regarding the tsetse and its habits, shows that this fact is fully recognized. Hitherto efforts have more or less failed to deal effectively with the insect carrier. No natural enemy has been found which might be utilized on a large scale or which promises well; trapping by bird-lime and other sticky preparations has not done much good; tsetsefuges appear to be of little value, while in most places it seems hopeless to try to destroy the pupae on a large scale.

Not long ago I paid a visit to an area under cotton cultivation on the Blue Nile, and saw for the first time the ingenious "Andres-Maire" process* for trapping insect pests and especially moths. It consists in using what are called "kiosk" traps, which are like large lanterns standing on legs. The sides are formed of metallic canvas, and thick canvas bands soaked in the liquid which attracts the insects to the traps are suspended in the interior. The moths are attracted by the strong smell of this special proprietary liquid, and flapping against the shutters find a narrow entrance between them and enter the trap. They remain on the bands all night, and in the morning when they want to fly away find they cannot do so owing to the way in which the trap is constructed. A basin filled with water and a little petroleum completes their discomfiture and forms their grave. These traps are said to be very successful, and it seems to me that something on the same lines might be tried in the case of tsetse flies. It should be easy enough to construct a trap into which a hungry tsetse fly could penetrate but out of which a gorged one could not get. As bait, blood might be used—preferably, perhaps, citrated—or fresh pieces of raw meat from cattle or antelope might serve the purpose, and would, I think, act as infallible lures. It should not be difficult, either, to invent a clockwork arrangement in connexion with a small petroleum tank at the top of the trap whereby once in the twenty-four hours—that is, at night—a spray of oil might descend on the occupants of the trap and slay them wholesale. Such traps would be more or less self-acting, while possibly the petroleum tank and spray might be dispensed with altogether and the flies left to the tender mercies of the native attendant responsible for fixing the bait or adding the blood, as presumably he would have to attend nightly to the traps. It would require no great intelligence to do so properly. A little experience would soon show the best way of operating them. They could be placed in the neighbourhood of villages, but sufficiently far away to prevent them merely serving to increase the visits of "fly" to the villages themselves. They could also be placed near watering places and at such other spots—that is, places where native roads cross infected *khors*, etc.—as might seem desirable. I admit this is merely a suggestion, but so far as I can find out it has not hitherto been made, and it seems to me worthy of a trial, for, until we can destroy the tsetse on a large scale, we are, I believe, more or less helpless against the spread of this dread disease, and can only achieve partial results with great difficulty and at very great expense.

A Native Trap.—Since writing the above I have been given some interesting information by Mr. J. W. Sagar, one of the Government inspectors in Southern Kordofan, to whom I mentioned my suggestion about these traps. Formerly the district where Kawalib, a limited "fly" belt, is situated, was under his jurisdiction. The fly is *G. morsitans*, and the belt is quite peculiar. There is no water save that in the wells and what collects during the rains. The tsetse flies are not found near the latter. They haunt the area served by the wells, and are found only in the proximity of rocks and hedges. The belt is about twenty miles long and three or four in breadth. There is no evidence as regards the existence of the flies in any of the adjoining districts. This limited and peculiar distribution is said by the natives to be due to the fact that the fly was intentionally brought here from the river (presumably the Bahr-El-Ghazal) for purposes of revenge! This may or may not be true, and Major Morant's statement, quoted in our second report (pp. 29 and 30), says nothing about such an origin, but certain it is that at the present time the natives trap the fly in gourds containing blood as a bait and then liberate them in spots where the cattle or horses of their enemies are grazing or are collected together. The trap is a spherical gourd with a hole cut in the top. It is half filled with blood and carefully watched. As soon as a number of flies have entered it in quest of food, the native rushes forward and claps his hand over the aperture. He then closes the hole in some more permanent fashion, and carries off the flies in triumph for the future discomfiture of those with whom he has a feud. This native custom would certainly seem to indicate that a blood trap is a feasible method of dealing with one of the greatest pests from which Africa, the land of pests, has ever had to suffer.

* Messrs. Andres, Maire, and Co. are an engineering firm in Alexandria, Egypt.

THE NECESSITY FOR THE USE OF COLOUR NAMES IN A TEST FOR COLOUR BLINDNESS.

By F. W. EDRIDGE-GREEN, M.D., F.R.C.S.,
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(From the Institute of Physiology, University College.)

NOTHING, in my opinion, has retarded the knowledge of the subject of colour blindness more than the statement (attributed to Holmgren) that in any test for colour blindness names were not to be used. It was usual to state that on no account must the examinee be asked to name a colour; if any explanation were vouchsafed at all, the writer added the following, which he appeared to regard as final: "When a man matches a colour, he is doing something definite with his hands," or it was stated that a man might know the difference between colours quite well and yet name them wrongly.

I have never come across a man who was a candidate for an employment in which he had to distinguish between red and green lights, and who on examination called green "red" and red "green" through colour ignorance, and who was really able to distinguish between these colours and had a normal colour sense. I believe that I am right in stating that though the Board of Trade has regularly employed a test for colour ignorance, it has never yet found a case in which it has existed. All the tests for colour blindness which have been proposed during the last few years have been naming tests, and those who are best qualified to judge have recognized that the use of names is a necessity. There are, however, many who still adhere to the old statement that names should not be used, and I therefore propose in this article to analyse the difference between matching and naming colours, and to show that the use of colour names is a necessity, and that no test for colour blindness can be efficient which ignores them.

If an examinee be placed before a number of coloured

wools and, having been given a light green wool, be asked to pick out something similar, being told that there are none exactly alike, his mind may work in either of two ways. He may say to himself, "This is a light green wool; I will therefore pick out similar green wools lighter and darker than the test colour." In this case it will be noticed that he will go through the test in exactly the same way as if he had been first asked to name the test colour and had replied, green, and had then been told to pick out other wools with a similar hue of green. He may, however, be chiefly influenced by luminosity, and as no colour names have been mentioned, pick out all the wools of a similar degree of brightness, thereby failing in the test and appearing to be colour blind. When I first commenced the study of colour blindness one of our best known Royal Academicians, famous for his colouring, picked out all the confusion colours to match the test green. On further examination it was quite evident that his colour sense was supernormal, and he correctly and accurately named every one of the confusion colours, but he declared most emphatically that when colour names were not mentioned the similarity between two light colours was greater than two wools of the same hue but different degrees of brightness. I find that many other artists agree with him; in fact, most persons will regard a darker shade of some colour as an entirely different colour; for instance, if we take two yellows, each having the same dominant wave length, the bright one will be called yellow and the second brown, and the latter will not be put with the yellow at all. It is indeed difficult to convince most persons that brown is only a dark shade of yellow.

In a test for colour blindness a person is rejected who confuses or applies the same name to two colours which are plainly distinguished by the normal sighted as different. It should be clearly recognized that the test should show whether the examinee comprehends the nature of a colour—that is to say, that he picks out the colours by their character of greenness. The argument, therefore, that when a person is matching without naming he is doing something definite with his hands is fallacious, because when he is told to pick out green wools similar to that of the test green he is also doing something definite with his hands, only any opportunity of mistake through judging by luminosity instead of colour is avoided.

I have been lately ascertaining the percentages of colour blindness in men, and find that about 6 per cent. are definitely colour blind, whilst 25 per cent. have a diminished colour perception compared with the other 75 per cent. Now the 6 per cent. when examined with my lantern make mistakes between the red, green, and white lights, when they are clearly distinguished as different by the other 94 per cent., and any onlooker would say that they were rightly rejected, and it would not be safe for them to be in command of a ship in which it was necessary for them to distinguish between these three lights. Holmgren estimated the percentage of colour blindness as 3.25 per cent., and he considered that the least degree of colour blindness which could be detected should be a cause of rejection.

Nothing shows the value of colour names better than an examination with my lantern of an educated colour-blind man who has just passed Holmgren's test with the greatest ease. He miscalls red "green" and green "red," and applies either term to yellow, thus not only proving his colour blindness, but showing how absolutely unfit he is to act as an engine-driver or a look-out. Exactly the same applies to the improved Holmgren test, the official test of the Board of Trade, in which two new test colours similar to those used in my Classification Test have been added. Many colour-blind men will pick out the wools to match all five test colours as accurately and easily as a normal-sighted person, so that, after a long, tedious examination, I should not have suspected they were colour blind. On an examination with my lantern, however, lasting less than half a minute, red has been called green, nothing or white; white has been called red or green, and green has been called red or white.

It must be noted that this method of matching is different from that in which two colours are put in close juxtaposition and compared. When the latter method is used, and particularly when light of known wave length is employed, very accurate and important information may be obtained. That is to say, two colours which look quite different to the normal sighted appear similar in every respect to the colour blind. When, however, a difference is observed the colour blind may make matches even more accurately than most normal sighted persons. For instance, it is stated that the ordinary dichromic cannot make a match with Rayleigh's apparatus for matching sodium yellow with a mixture of lithium red with thallium green, $\lambda\,670 + \lambda\,535 = \lambda\,589$. I have, however, found that many dichromics are able to make this match as accurately as a normal sighted person, and one dichromic has, in taking a considerable number of observations, less mean deviation from the normal than any other person I have examined. There is also in matching another source of error when there is shortening of the red end of the spectrum. When the shortening is absolute, any number of rays from the shortened portion may be added to one of the factors of the match without altering its appearance, therefore numerous pinks of different luminosity and redness may be regarded as absolutely identical with a given blue, whilst another pink or purple which is clearly bluer to the normal sighted than the colours confused, is easily distinguished by the colour blind, because it contains red rays which are perceptible to him, and which occupy a higher point in the scale than his shortened portion. If the colour-blind be given a large number of coloured objects, they select colours which, whilst appearing different to the normal-sighted, appear absolutely identical in hue and shade to them. For instance, many dichromics will, when a skein of yellow-green, and one of orange be intertwined, remark that the two are absolutely identical in every respect. When there is shortening of the red end of the spectrum, a blue and a pink of a lighter shade will also be regarded as identical. Two colours which are different to the normal sighted and appear identical to the colour blind are called pseudo-isochromatic, and numerous pseudo-isochromatic tests have been invented. The examinee has to read a letter of one colour which is surrounded by the colour of confusion. These tests present very many practical difficulties, as will be comprehended from the remarks I have made on the composition of colours. For instance, a pink letter on a blue ground must only contain rays from the shortened portion, and a pink which appeared in every respect similar to the normal sighted, but contained rays of a shorter wave length, is easily distinguished. As cases of colour blindness differ so much in the degree of shortening and absorption, pseudo-isochromatic tables could not be constructed for all; though, when the tables are well constructed, they are useful for the commoner varieties. Naming the colours, however, is a much better test.

It might be thought that when two colours are regarded as identical, it is a matter of pure chance as to which name is given to the colour. Many of those who have now come round to my opinion that the use of colour names is a necessity, hold this opinion, and I wish, therefore, to show that this is not the case, and that the colour blind name colours according to their colour perception, and rarely guess. If they did guess they would know that they were colour blind, and those that are most difficult to test are those who are convinced that they are normal sighted. If, for instance, we take a blue and a pink, which are regarded as identical by a man with shortening of the red end of the spectrum, he will with the greatest assurance declare that both are blue. There is no reason why he should say otherwise, because he does not see the red component of the pink but only the blue. Not a single one of the very large number of people that I have examined of this kind has called the pink other than blue, purple, or violet. It is the same with the orange and yellow-green, both will be called by the dichromic yellow. It is the same with other coloured objects, certain ideas of colour are associated with certain characteristics, and named accordingly. Naming is not haphazard with the colour blind any more than it is with the normal sighted. Another factor which makes naming more important than matching in a test for colour blindness is that simultaneous contrast is increased in the colour blind, and therefore, when two colours are compared in which a difference is perceptible, the difference becomes more marked on comparison. For instance, a trichromic will say that a yellow light placed adjacent to a red one is green, whilst the same yellow placed adjacent to

a green will be called red; this shows how many of the colour blind are able to escape detection when methods of comparison are used. Again, why should a colour-blind person guess or attempt to guess that a red light is visible when he can see nothing, or call a light which appears to him definitely white, green. In cases where he is on the border line of uncertainty, he may guess, but does so in such a hesitating manner that his difficulty is quite obvious to the examiner. When, however, a red light is shown to him which has all the characteristics which he has associated with green, or a green light which has all the characteristics he has associated with red, he names the colour shown without doubt or hesitation. The colour names which I refer to in this paper are those which are clearly distinguished by the normal sighted—red, yellow, green, and blue—and with the use of one or more of these colour names with black and white, all colours can be sufficiently described.

Reports
ON
MEDICAL AND SURGICAL PRACTICE IN THE HOSPITALS AND ASYLUMS OF THE BRITISH EMPIRE.

TAUNTON AND SOMERSET HOSPITAL.

UTERINE FIBROID WITH CHRONIC SALPINGITIS.

(Under the care of Mr. L. H. C. BIRKBECK.)

[Reported by A. CLOUSTON RUSSELL, M.B., Ch.B, Senior House-Surgeon.]

THE following case is interesting, as it illustrates how few symptoms may be present notwithstanding extensive pathological change in the body.

E. M. A., single, a spare woman, aged 45, was admitted to the Taunton and Somerset Hospital on October 28th, 1911, complaining of slight enlargement of the abdomen.

She said she had enjoyed the best of health up to three weeks before admission, when she noticed a slight enlargement of the abdomen and began to worry about it; there were no other symptoms whatever. Menstruation was normal.

The abdomen was found to be slightly distended, due to the presence of fluid; it moved freely with respiration, and there was no tenderness anywhere. A small hard mass could be felt situated deeply on the right side of the pelvis. It was diagnosed as fibroid of the uterus. On vaginal examination extensive parametritis was found, the uterus being adherent both to the bladder and to the rectum. The heart beat was rather feeble but regular; there was slight sclerosis of the radial arteries. The pulse was 94 and the temperature 97.2°.

As there was some difficulty about consent to an operation she was simply kept in bed under observation. On November 2nd she suddenly cried out, and her face became ashen. She died in a few minutes, the attack having all the appearance of angina pectoris.

After her death her brother told me that for the past two years she had always slept best when propped up in bed; also that she had been a great walker, covering twenty miles one day within a fortnight of her admission to hospital; she had never complained of any cardiac symptoms. A *post-mortem* examination was made by Dr. Egan and myself, with the following results: The heart wall was flabby and thinned; there was slight sclerosis of the coronary arteries, but no valvular disease. About 1½ pints of ascitic fluid were found in the abdomen. There were small reddish deposits scattered all over the parietal peritoneum, mesentery, intestines, and uterus; slides of these were obtained from the Clinical Research Association, and proved to be of a chronic inflammatory nature; no evidence of tuberculosis could be found. The uterus and appendages, with the bladder and rectum, were bound together in one mass. A fibroid projected from the fundus of the uterus on the right side. The right Fallopian tube was greatly thickened, evidently from chronic inflammation, and widened out into a hydrosalpinx near its fimbriated extremity; the ovary on that side was entirely transformed into a blood cyst the size of a hen's egg. The left tube was chronically thickened and full of caseous material breaking down into pus; a somewhat larger blood cyst represented the left ovary. Both tubes were ulcerated on their external surface, while deposits were numerous upon them and upon the ovaries.

Memoranda:
MEDICAL, SURGICAL, OBSTETRICAL.

FRACTURE IN UTERO.

ON May 13th I was sent for to attend a primipara. I found a footling presentation and the cord prolapsed. After prolonged labour a male child was delivered dead. The right leg was bent at almost right angles half way down the shin. The tibia had been fractured and united. Bony union seems to have been good as the bone was quite firm. Over the fracture was a well healed cicatrix of about 1 in. in length. The four smaller toes on the same foot were united into one. There were no other developmental abnormalities. The evidence of fracture and cicatrix was so plain that I cannot think of any other explanation, especially as there was a confirmatory history of the mother having fallen against the edge of a large tub when six and a half months pregnant.

Lisburn. J. L. RENTOUL, M.B.

WIRING THE PATELLA TWICE IN EIGHT WEEKS.

THE case of rewiring the same patella twice in eight months, reported by Mr. Thos. North in the BRITISH MEDICAL JOURNAL for May 25th, and the evident rareness of the incident, make me wish to record a somewhat similar case.

J. S., aged 21 years on the day of the accident, injured his left leg while playing football on December 9th, 1911. I saw him at his home some time after the accident, and found him suffering from a transverse fracture of the left patella, with separation of about ¾ in.; the lower fragment felt very small. As I was unable to persuade his people to have the fracture wired, he was put up in a back splint, with over-extension of the leg, and the fragments approximated by a figure of 8 bandage. On December 17th permission was got to operate; he was removed to the Royal Albert Edward Infirmary, Wigan, and the operation was performed on December 20th. After clearing out some clots the pieces were wired, the lower piece being very small indeed, and the capsule sutured. He did very well, and left the infirmary a fortnight later, wearing a plaster-of-Paris case. About the last week in January the case was removed; union seemed to be good; there was a fair amount of flexion, and he was allowed to go about with a stick.

Early in February, while out walking after a sharp fall of snow, he slipped, and in attempting to recover himself felt the knee give way. He was removed at once to the infirmary, and on February 19th the knee-joint was again opened, the former scar being dissected out. The wires had torn clean through the lower fragment, and this was so injured that it was found impossible to pass further sutures through it; a thick silver wire was therefore passed through the ligamentum patellae below and the muscle above, and brought out at the outer aspect of the joint. This enabled the two fragments to be brought fairly well together, and by carefully tightening the wire the position was maintained.

He was sent home a month later with a back splint and footpiece on, and in April I put on another plaster case, which he still wears. We were much interested as to the condition of the bone on reopening the joint at an interval of eight weeks from the first operation, and were much surprised to find, so far as we could see, no attempt at union, either bony or cartilaginous—in fact, the fragments seem to have been kept together solely by the wire sutures, and yet the man was young, healthy, and vigorous. Several of the members of the staff were present at the second operation, and all agreed that there seemed no sign of attempted repair.

The fractures, as in Mr. North's case, were both the result of indirect violence, and I have been unable to find any record of a similar occurrence in any medical literature to which I have had access.

JOHN BLAIR, M.D.,
Honorary Surgeon, Royal Albert Edward Infirmary, Wigan.

Reports of Societies.

ROYAL SOCIETY OF MEDICINE.

Resumed Debate on Syphilis.

The discussion was resumed by Major H. C. French, R.A.M.C., who expressed the hope that there would be legislative control of venereal disease, which was a different matter from the State regulation of vice. He described the way in which subjects of syphilis crowded medical institutions and sapped society. In 1854 Dr. Holland estimated that in the United Kingdom there were 1½ millions of persons infected with syphilis each year, and Dr. Mott had stated that 3 to 4 per cent. of cases of syphilis were followed by parasyphilitic affections. Some 11 per cent. of the male private patients of lunatic asylums were syphilitic and 8 per cent. of pauper admissions, while in New York among 300,000 cases of skin disease 11.5 per cent. were affected with syphilis. In Paris it was estimated that of every 100 men 15 were syphilitics. During the past few years the percentage of cases of freshly contracted syphilis in the British army, especially in London and Woolwich, was greater than in that army abroad. That was probably due to the lack of control of the disease in England at its source, as it was not yet notifiable in England, and the patients were not segregated, and so the disease was spread broadcast. The freshly contracted disease should be distinguished from relapsing conditions. There had been recorded 110 epidemics of syphilis, with 3,000 victims who had acquired the disease innocently. Playing kiss-in-the-ring was directly responsible for several cases. In 75 per cent. of cases of syphilis among married women the disease was traced to the husband. In Russia, in villages where prostitution was unknown, the population was ravaged by the spread of congenital syphilis. These facts, together with the numerous miscarriages and abortions, constituted a most important social problem. Recently in Chicago the Church had objected to marry persons without a certificate of good health. Alcohol conduced largely to sexual immorality. He referred to the marked benefit in India following the passing of the Cantonment Act of 1897. He objected to Mr. McDonagh's attribution of the increase of syphilis to intemperance, for of 461 cases of soldiers admitted to hospital in Malta by him for syphilis, 203 were total abstainers. In 1896 the Secretary of State for the Home Department was approached with the request that he would appoint a Departmental Committee to inquire into the prevalence and treatment of venereal diseases in England, but the Government did not think the time had arrived for taking such action, because public opinion was not sufficiently formed. Therefore it was clear that the duty of the profession was to enlighten public opinion and give the correct facts. Very many women suffering from the disease did not have proper treatment for it because of ignorance. India constituted a good guide as to the probable results of proper action. He advocated confidential medical notification of the disease, and medical treatment for short periods in hospital during the early contagious stages. A large amount of syphilis was spread by clandestine prostitution, but the effective control of open prostitution by localization of such women to certain streets would have great benefit. He spoke strongly of the need for drastic suppression of the middle man, who not only fostered the nefarious calling but lived on the income of these women. Solicitation must be checked, and that could be done under the Town Clauses Act, 1847. It had been pointed out in Parliament that a young girl was taught how to find her way to Timbuctoo but not how to avoid Piccadilly Circus. Sufficient beds should be set aside for venereal diseases in every London hospital, and there should be special courses of instruction on the subject for students. In Germany the circumcision of every infant was found to markedly protect against syphilis later in life.

Major Gibbard, R.A.M.C., devoted his attention to the question of treatment. He was very favourably impressed with the results from the use of salvarsan; the fact that the Wassermann reaction was negative after such treatment showed that salvarsan was a specific remedy, and not merely a symptomatic one. He contributed a very carefully prepared analysis of series of cases treated by mercury in a thorough way, and compared them with cases treated by salvarsan. The latter, in turn, were compared with results achieved by the use of neo-salvarsan, of which Professor Ehrlich had sent him a good supply. The convenience, the absence of reactions, and the rapidity of the benefit following neo-salvarsan made it a very desirable substance to use, but it was early yet to make proper comparisons. Professor Ehrlich had recommended that the maximum dose of neo-salvarsan for a man should be 1 gram, and the interval between injections six to eight days. The total given in one course should not exceed 5 to 6 grams.

Sir George Savage dealt with the subject of syphilis in relationship to insanity. He said he had nothing new to contribute, but he would convey the result of the experience of a long life. It was taught quite early that there were certain people in whom syphilis affected the viscera, the bones, the muscles, etc., and other persons in whom the effect fell upon the nervous system. A parallel condition of affairs had been shown to exist in reference to alcohol. It had been pointed out that a frequent associate of mental disorder was arterial sclerosis, sometimes combined with Bright's disease. He had seen cases with a distinct history of syphilis in whom there was ptosis, external strabismus, and mydriasis, which cases got well apparently under treatment, but afterwards developed mental symptoms, and a certain number were known to have died of general paralysis. Slowly it had been forced upon them that the fact must be accepted that there was a definite relationship between syphilis and general paralysis. It was certain that in some syphilitic cases head injury had been an exciting cause of the general paralysis. An interesting question was whether general paralysis could be produced by injury without syphilis. Thirty to forty per cent. of the ordinary population of asylums had some neurotic inheritance, but, taking 100 cases of general paralysis, the proportion with a neurotic tendency was definitely less than that. Another question was as to whether there was a specially dangerous variety of the syphilitic poison. There had been cases recorded in which a woman had been infecting a number of men with syphilis, and in which the proportion of those men who had become general paralytics was quite different from the ordinary proportion. There seemed to be a definite specific degeneration which was more than mere arterial degeneration, affecting also the nervous tissues as well as the arteries. He had been struck with the occurrence of certain forms of mental degeneration associated with syphilis, starting with some local palsy, and in some cases passing off without apparently ending in general paralysis. But a large number of cases of general paralysis started with some local brain lesion. Congenital syphilis might result in general paralysis at 30 to 35 years of age, the person never having himself acquired the disease. In many children of syphilitic parents there was a handicapping from the first, and some were the subjects of what Sir Thomas Clouston called "postponed idiocy."

Dr. Douglas White also bestowed considerable attention on the question of the regulation of vice, pointing out that clandestine indulgence among women had more than doubled in volume. Eighteen was a dangerous age for women, and he did not consider that special hospitals would meet the requirements; the person who acquired the disease naturally did not wish to wear a label which all might see. There was room for much improvement in the teaching of the subject to students. Specialization should be encouraged and posts created for specially qualified persons. He proceeded to give some very informing statistics, and held out a hopeful view if men and women who acquired the disease could be persuaded that it was to their own and everybody's best interest that they should come for early treatment.

Dr. Fremantle supported those who advocated more efficient teaching concerning the disease. He showed that official returns, as evidenced by the case of Prussia, did not represent the true state of affairs, and medical men should rather trust the impressions they derived in a general way in regard to the degree of prevalence. He argued that suppressive methods failed, as did also the institution of weekly medical examinations. In Berlin, despite the thorough measures, there were 16,000 police charges in connexion with brothels every year. He advocated voluntary notification, but that would only embrace

a certain proportion of the cases. The professional or successful business man would do his utmost to avoid notification, because his success was so intimately bound up with his reputation. But a hopeful feature was the possibility of assessing the prevalence of the disease from the operations of the Insurance Act, assuming that a working arrangement could be reached from the medical side.

The debate was adjourned until July 8th.

Reviews.

A PIONEER OF EXPERIMENTAL PHYSIOLOGY.

ALTHOUGH Burdon-Sanderson may perhaps be said to have achieved more by what he was than by what he did, he did so much both directly by his own work, and indirectly by his inspiring influence on his pupils, that he fully deserves a niche in the Temple of British Science. This has been provided for him in the memoir which we owe partly to the pious care of his widow, partly to that of his nephew and niece—Professor J. S. HALDANE and Miss E. SANDERSON HALDANE.[1] Burdon-Sanderson, who was born at Jesmond in 1829, came of a good old stock, even if the tradition that the Burdons or Bourdens came into England with the Conqueror is merely legendary. Part of his childhood and some of his earliest recollections were connected with Biddlestone, which has been regarded as the Osbaldistone of *Rob Roy*. His youth was passed in intimate contact with nature. He was fond of fishing, and the observation of birds was one of his great pleasures. His taste for natural history was early aroused, and the moors about Otterburn gave him ample opportunity for its indulgence. When he was about six years old he read Stanley's book on birds, Captain Cook's voyages, and other works of travel or natural history. When young he had a good voice and sang well, and also played the violin with no mean skill. This was given up when he went to Edinburgh, but his intense love of music never left him, and it gave him relief in his last illness.

He was intended for the law, but all his inclinations were towards the study of medicine. He entered the University of Edinubrgh in 1847, and at first threw himself with eagerness into the study of botany. The teachers who chiefly influenced him were Balfour, Goodsir, and Hughes Bennett. Burdon-Sanderson afterwards said that Bennett's most important achievement was the introduction into the Edinburgh school of an exact method of studying the characteristic phenomena of disease. Of the instruments then available the microscope was the most important. In 1841 it had not found its way either into the ward or the consulting room. Although Sharpey and others had illustrated their lectures with microscopical preparations, Bennett was the first to place the instrument in the hands of the student. The high esteem in which Burdon-Sanderson was held by his fellow students is shown by the fact that in 1850–51 he was chosen to be third President of the Royal Medical Society of Edinburgh. In 1851 he took his degree, the subject of his thesis being the metamorphosis of the coloured blood corpuscles; for this he was awarded a gold medal. He then went to Paris, where he worked at organic chemistry with Gerhardt and Wurtz. He also attended lectures on physiology by Claude Bernard, by whom he was greatly influenced. He described Bernard as the most inspiring teacher, the most profound scientific thinker, and the most remarkable experimental physiologist he had ever known. Recollecting the magnificent laboratories of the present day, it is interesting to read that Bernard worked in a cellar and Wurtz in a garret. Burdon-Sanderson did not neglect practical medicine in Paris; he was a regular attendant at the hospitals.

In 1852 he began the battle of life in London. A brief review of his appointments will suffice to show the variety of his experience. He was Medical Registrar and Lecturer on Botany—afterwards on medical jurisprudence at St. Mary's. That he was a botanist in the real sense is shown by the article on vegetable reproduction written by him for Todd's *Cyclopaedia of Anatomy and Physiology* in 1354, which is said by Professor Vines to be the best extant summary in the English language of the state of knowledge at that time. Early in 1856 he was elected Medical Officer of Health for Paddington. He was very active in the discharge of the duties of this post, and although on occasion he withstood Bumble to the face he got on well with his vestry. He engaged in private practice, but his anxiety about the welfare of his patients was too great for his peace of mind. He continued, however, to hold the appointment of Physician to the Middlesex and Brompton Consumption Hospital for some years. In the meantime he had made investigations for the Government on cerebro-spinal meningitis, diphtheria, cattle plague, and cholera. The death of his father having placed him in a more independent financial position he devoted himself to pure science. In the mid-sixties he made experiments on the effects of the respiration on the circulation, and in 1867 he was elected a Fellow of the Royal Society, and was invited to deliver the Croonian Lecture on his experiments before that body. In 1870 came the turning point in his career. On the invitation of Sharpey he was appointed Professor of Practical Physiology and Histology at University College, and in 1871 Professor-Superintendent of the Brown Institute. There he made many of his experiments on infective processes; in this field he was one of the earliest workers in this country. In 1874 he succeeded Sharpey in the Chair of Physiology.

As a teacher of physiology he found his proper sphere of action, and he threw himself whole-heartedly into the work. He made the laboratory the basis of his instruction. The idea came from Sharpey, but to Burdon-Sanderson belongs the credit of carrying the new conception of scientific education into effect. From University College he migrated to Oxford in 1882, where he occupied the newly founded Waynflete Chair of Physiology. At Oxford he was at first met with active opposition, and even persecution, at the hands of obscurantists; but his quiet persistence finally triumphed, and he made Oxford a living medical school. At Oxford he remained for the rest of his life. He became Regius Professor of Medicine in 1895. Not content with his efforts to develop the school in all directions, he continued to pursue original research, and did much work for the furtherance of science.

To our mind the special greatness of Burdon-Sanderson is the large sphere of knowledge which he took for his province. He was not merely a physiologist, but a biologist in the largest sense. He was also a clinical physician, and had had considerable experience in dealing with practical problems of health. All this prevented his ever drifting into the comparatively narrow groove of pure science—a danger which is making itself felt at the present day, when physiology is becoming more and more divorced from medicine, and, in fact, is sometimes taught as a branch of natural science entirely independent of medicine. This is apt to engender indifference, and even something like contempt, for the practical applications of physiological investigation. We want more physiologists of the type of Burdon-Sanderson, who never lost sight of the intimate connexion between the facts of biology and the causation and evidence of disease.

The *Memoir* gives a charming picture of the personality of the man and of his happy married life. The secret of his influence was personal magnetism; he was quick to recognize and encourage promise, but he abhorred anything like superficiality or charlatanism. Nothing less than the exactest truth would satisfy him. Perhaps this is why, in regard to the deeper problems of life, he gave the impression of being reserved. The book also contains a number of papers and addresses on the excitability of plants, the study of physiology, cellular pathology, and the duty of society to the consumptive bread-earner. Altogether it is a simple but adequate record of one of the noblest Englishmen of his time.

[1] *Sir John Burdon-Sanderson: A Memoir by the late Lady Burdon-Sanderson.* Completed and edited by his Nephew and Niece. With a selection from his Papers and Addresses. Oxford: Clarendon Press. 1911. (Med. 8vo, pp. 315. 10s. 6d. net.)

BURY'S "DISEASES OF THE NERVOUS SYSTEM."

IN his monograph on *Diseases of the Nervous System*[2] Dr. BURY of Manchester has set himself to write a clinical account of the diseases arranged according to a clinical method of classification. His object has been to enable the student to make his diagnosis on anatomical principles,

[2] *Diseases of the Nervous System.* By Judson S. Bury, F.R.C.P. University of Manchester Publications, No. lxvi. Manchester: University Press, 1912. (Med. 8vo, pp. 798; 216 figs., 9 plates. 15s. net.)

so far as is possible, with the aid of the results furnished by modern pathological methods. The attempt should always be made, Dr. Bury teaches, to allocate all signs and symptoms of nervous disorders to the particular part of the nervous system that is primarily diseased. He is not a believer in what are called "functional" disorders, holding that even they really rest upon some organic, though at present undemonstrable, lesion of the tissues. Hence, even in the case of "functional" troubles, he encourages the student first to run the position of the lesion to earth, then to consider the nature of the disturbance—whether chemical, vascular, or other—that has interfered with the function in question. The book is divided into twenty-one sections. The first two, fifty pages in length, deal with the general anatomy and physiology of the nervous system, the etiology and general pathology of its disorders. Then come forty pages on the clinical manifestations of nervous diseases, in which the methods of examining patients and applying special tests are described. The next two sections deal with the spastic paralyses, and with paralyses that are flaccid or atrophic. The sixth section contains the intrinsic diseases of the spinal cord in which the signs point to a focal lesion; the seventh, of twenty-five pages, is given to spinal disorders characterized by the presence of pain, including spinal meningitis and compression myelitis. The following sections discuss a great variety of diseases, grouped clinically into those in which equilibrium is disordered, those in which some muscular spasm occurs, intermittent neuroses of all sorts, disorders of speech, diseases of the cranial nerves. Two important sections describe cerebral meningitis and cerebral vascular lesions, and intracranial tumours and abscesses are thoroughly discussed. At the end of the book neurasthenia and hysteria are considered, and there are thirty pages on syphilis of the nervous system—excluding tabes, already dealt with among the disorders of equilibrium, and general paralysis of the insane. There is a brief index.

Dr. Bury writes clearly, and gives a comprehensive but not overloaded account of the various nervous diseases. He adds no references to the literature, and quotes few names or dates; each disorder is considered from the usual points of view—etiology, pathology, symptoms, diagnosis, prognosis, treatment—conscientiously, and with the resources of a great personal experience in the observation of patients with nervous diseases. The result is the production of a thoroughly sound and trustworthy text-book, not too abstruse, straightforward, well suited to the needs of the medical student and the general practitioner, up to date both clinically and also from the point of view of treatment. It is well got up and printed; the illustrations—many of them borrowed from other works—have not been ill chosen. We can cordially recommend Dr. Bury's admirable work to students and medical men who want a good practical book on what is apt to be a complicated and intimidating—and therefore neglected—subject.

WHITLA'S DICTIONARY.

Among the familiar textbooks there is none better known than Whitla's *Dictionary of Treatment*.[3] Probably a very large proportion of the profession throughout the British Isles have consulted its pages in search of hints for the handling of difficult cases, and have not looked in vain. But the treatment of disease has undergone great changes in the last ten years, and the last edition of the dictionary appeared in 1902. Hence the author has set himself the great task of rewriting the book and embodying in it the latest information available in every branch of general and special medicine and surgery, leaving the gynaecological sections in the capable hands of Dr. Robert J. Johnstone of Belfast.

With the adoption of new views on the pathology of many diseases, some of the old remedies have of necessity been superseded. Sir William Whitla has been actively watching the process during the period of change, and it is a pleasant feature of the new edition of his book to find that supersession does not always imply rejection. Many of the time-honoured methods of treatment are as efficacious at the present day as they have been in the past, although some of them cannot be regarded as strictly scientific in principle. In describing the newer forms of treatment he has not failed to record the successes of the older procedures, but he gives clear indication of their relative merits.

It is in respect of diseases due to microbic agency, in which the identity of the microbe has been determined, that therapeutic science has undergone the greatest change. In some of these the application of the new knowledge has reached a point entitling it to general acceptance, but in many others, as will be seen from the author's account, a multitude of counsellors have attained to wisdom but not to agreement. Hence the careful reader will do well to discriminate, and to make use only of those methods which have passed out of the experimental stage and have been received by the profession in other countries as well as in his own. The therapeutic values of vaccine and serum are stated with an equal air of conviction by quotation from many well-qualified observers, and it will, perhaps, be found difficult to determine which of the many guides should be followed.

The possibility of latent microbic infection from hidden inflammatory foci has to be reckoned with in dealing with almost all forms of acute illness. In many instances where palliative treatment was formerly regarded as the limit of possibility, attention has now to be paid to the counteraction or annihilation of a poison, rather than to the immediate relief of the troubles to which it may be giving rise. Even a common cold may be cut short by a timely injection, but in the ordinary routine of practice it may be found well to put the older remedies also in action. Counteraction by means of vaccines in the more obscure diseases, such as chronic arthritis, is somewhat of a leap in the dark, but the polyvalent vaccines have undoubtedly proved efficacious at times. In some of the more desperate maladies, where death appears to be the only outcome, the use of serum and of vaccines would seem to be fully justified, even where the exact conditions are unknown. The success of Flexner's serum in cerebro-spinal fever, although by no means constant, is an illustration of this.

Of the book as a whole we cannot award greater praise than by the remark that the present edition is a worthy successor to those which have preceded it. Tested in various ways, it appears to represent the latest stage of all that is worth knowing on the subject of treatment.

[3] *A Dictionary of Treatment, including Medical and Surgical Therapeutics.* By Sir William Whitla, M.A., M.D., LL.D., Professor of Materia Medica and Therapeutics in Queen's University, Belfast, etc. Fifth edition, 28th thousand. London: Baillière, Tindall, and Cox. 1912. (Cr. 8vo, pp. 1216, 16s. net).

NOTES ON BOOKS.

In the latest edition of *Burdett's Hospitals and Charities*[4]—the twenty-third to appear—an attempt is made to meet one of the few criticisms evoked by its predecessors. There is now complete correspondence between the figures dealt with in the commentary part of the work and those given in other sections in regard to individual institutions. The figures, however, still remain somewhat more ancient than is convenient in a reference book of this kind, or than might perhaps be expected in one which never appears until the year whose date it bears is well advanced—in other words, they are in all cases derived from accounts relating not to the year preceding that in which the volume appears, but to the last year but one. One chapter in the commentary deals at considerable length with the National Insurance Act in relation to hospital enterprise; it may be gathered from it that Sir Henry Burdett is disposed to urge hospital governors to exact from the State, in respect of insured persons admitted as in-patients, payment pro rata for their treatment and maintenance, plus 10 per cent. for medical attendance. Both the authorities of hospitals and the public are emphatically warned against accepting or countenancing a system of grants-in-aid. Among other evils, it would lead, it is suggested, to extravagance in management; friction between the governors or the municipalities and the voluntary hospital managers; State representation in the management; and, ultimately, to the extinction of voluntary hospitals and the substitution for them of State hospitals all over the country. This chapter adds greatly to the immediate interest of a volume which has grown to be indispensable.

[4] *Burdett's Hospitals and Charities, 1912.* By Sir Henry Burdett, K.C.B., K.C.V.O. London: The Scientific Press. (Crown 8vo, pp. 952. 10s. 6d. net.)

THE PARLIAMENTARY COMMITTEE ON PROPRIETARY MEDICINES.

Conclusion of Dr. Cox's Evidence.

ON June 25th Dr. Cox was questioned by Mr. Glyn Jones as to the suggestions of the British Medical Association for new legislation. Dr. Cox explained that by its first proposal the Association wished to convey that it was asking for the disclosure of each ingredient of a proprietary medicine and the quantity present, but knowing the difficulties in the way it would probably suffice if the names of the ingredients only were mentioned. At any rate, that would go far to fulfil what was required. The requirement of the Australian law that certain specified drugs should be disclosed when present in proprietary medicines was good as far as it went, but he did not think it went far enough. In the Association's second proposal, as to a warranty, no specific Act of Parliament was referred to. He understood that a label might be a warranty under the Sale of Food and Drugs Act, but that provision appeared to be so very ineffective that the law urgently required alteration. He was aware that the only section of the Act which exempted proprietary medicines was Section 6, but that exemption appeared to be remarkably effective.

Mr. Glyn Jones: Assuming that exemption is removed?

Dr. Cox: That is one of the things we ask for, certainly.

What do you think the effect of that would be? Supposing a customer asks for "Smith's Liver Pills," and he is supplied with them, would he not be getting the article demanded?—We do not think our suggestion for the removal of this exemption is a complete remedy, but if the label is made a warranty, and disclosure of the ingredients is required, as we suggest in our other proposals, then we think the removal of the exemption would be very effective.

Do you know there is a section in the Act now, making a person who applies a false description to an article liable to a penalty?—Yes, but it seems inconsistent with the exemption in Section 6.

Do you know why the clause I have mentioned is not put into force?—I have not the remotest idea.

Mr. Glyn Jones: Neither have I.

Asked whether the British Medical Association had any views as to whether it would be useful to abolish the licensing stamp on proprietary medicines, Dr. Cox said the Association did think that a stamp created a wrong impression among ignorant people, but it realized that revenue must be raised somehow, and there was no prima facie reason why proprietary medicines should not be taxed.

Sir Henry Dalziel asked whether proposals for new legislation submitted were the recommendations of the Council or of the members of the British Medical Association.

Dr. Cox replied that the policy of the Association was formed in a strictly constitutional manner. The Association was probably the most democratic body in the world, and was able to collect the opinions of its members in a way that few other bodies could. This question had been before the Representative Meeting and the Divisions, and it was really the policy of the Association as a whole and not of the Council.

As to the effect upon the proprietary medicine trade of a legislative enactment that the constituents of the medicine should appear upon the label, Dr. Cox said he thought it would be to kill absolutely some of the worst of them. That was the intention of the proposal. Others would not be greatly damaged by it.

Sir Henry Dalziel: You think that is the best way, rather than prohibiting the sale altogether?

Dr. Cox: I think you cannot do that. The prohibition would be avoided in all sorts of ways. The public ought to know what it is paying for.

Mr. Newton: At present the public insist upon having these things?—Oh yes, they like them.

Do you think the public would still refuse to buy if the ingredients were stated?—If the public knew that an article such as the one I mentioned last time, which claimed to cure all infectious diseases in from one to six doses, was composed of nitric acid and sugar of milk, it would realize that the medicine could not do all that was claimed for it.

You think the public is swindled by these things?—I do.

But you think the same representations made in medical papers are not heeded by the doctors?—Doctors are able to discount these statements.

It is a question of the presumed ignorance of the general public?—Very largely. A member of the public has not been trained to test drugs; he can only test them on himself, and a person who does that is usually a bad judge.

The advertisements of proprietary medicines in the BRITISH MEDICAL JOURNAL represent a rather material increment to its revenue. Supposing legislation were passed which practically ended the sale of these articles, would the Association be willing to make the financial sacrifice?—We are not recommending a course of which we should not be willing to bear the consequences.

Would the revenue lost amount to £20,000 a year?—We get a good price for our advertisements, but I should think the loss would be nothing like that. Moreover, many of these proprietary medicines would continue to exist.

Your case is that your readers are able to discriminate and can be trusted, but that the readers of other papers cannot be trusted, and in their interests legislation is necessary?—I think that is the case, putting it quite roughly. Without a medical education you really cannot balance up the claims of preparations. That is what medical training is for; it takes at least five years to learn that.

In reply to a further question, Dr. Cox mentioned the difficulty in regard to advertisements in the JOURNAL in which the Association sometimes found itself, and which could scarcely be avoided: that an advertiser would come into the columns of the JOURNAL, and, after making his reputation with the profession, would drop advertising in the JOURNAL altogether and obtain publicity in another way entirely.

Sir Henry Dalziel: I take it these "puff" articles in the JOURNAL are written after analysis?—Undoubtedly; but they are not "puff" articles in the ordinary sense of the term; they are written in a sober way.

There are obviously some proprietary articles that are being sold on the recommendation of the BRITISH MEDICAL JOURNAL?—Certainly. So long as a legitimate use is made of what we say, we cannot object.

You do not stipulate that no quotation from the JOURNAL shall be made in the lay press?—No; I do not think any stipulation has been made up to now.

Have you any views as to the value of sanatogen?—No; I have never used it myself, but I believe some members of the profession think very highly of it.

Mr. Bathurst: Most members of Parliament take it.

Mr. Lawson: Yes, for neurasthenia.

Dr. Cox: That shows, of course, that it must be valuable—(laughter)—but you must mind the advertiser does not get hold of that statement, sir. (Renewed laughter.)

Sir Henry Dalziel: That is another proprietary article that is recommended by the profession?—Yes; I have carefully defined my position on this point. I am not here to carry on a campaign against proprietary articles as such.

Supposing a patient gets a cough mixture from a doctor that cures him, is there any objection to having its value more widely advertised?—The objection is this: The cough may be due to ten or a dozen different things; the doctor examines the patient and forms an estimate of what it is due to, giving him a prescription for that particular kind of cough. To hand that prescription on to some one else who has another sort of cough is very unscientific and may sometimes be dangerous. Medicine is a most peculiarly individualistic science; you have to treat the individual. That is where the value of the family doctor comes in.

Your point is that no one should have treatment without a doctor's prescription?—That is a counsel of perfection. I recognize that all people could not afford to do that, although it would be the best thing if it could be done.

The Chairman put some questions to Dr. Cox as to the position of the JOURNAL in writing favourably of preparations sold at prices which bore a very remote relation to their cost.

Dr. Cox said he hoped the Committee would call those responsible for other newspapers before it and put to them the same questions, and see if they would meet the Committee to the extent that he had done.

The Chairman said that the reason the Committee had put all these questions to Dr. Cox as to the policy of the JOURNAL was on the principle, *Corruptio optimi pessima*. It was felt that if the BRITISH MEDICAL JOURNAL accepted these advertisements, the position as regards newspapers generally required the most careful consideration.

A letter from the solicitors of a firm whose products were mentioned by Dr. Cox at the last hearing, in connexion with a pamphlet containing the testimonials by medical men sent out with the preparation, was read by the Chairman. It was stated that the testimonials were never used without a signed permission from the medical men concerned, and a copy of the pamphlet was sent to each.

Dr. Cox said he not only accepted that statement, but he thought it was quite clear that when at the previous sitting it was suggested that some of the testimonials were bogus he said he passed no such imputation. He only said he felt sure that some of the medical men had no idea that the pamphlet was going out to the public. It had been brought to his knowledge that he himself had written to this firm, and he certainly only intended that his recommendation should be used as a means of approaching the profession. A phrase in any of the doctors' letters that the firm might make "any use it liked" of the testimonial he took to mean within the bounds of the profession.

The Chairman: I have a letter from the Institute of Hygiene with the name of a very distinguished medical man, Sir William Bennett, at the head. They appear to hold meetings and distribute samples of various products. They have issued certificates of purity, quality, and merit in respect of certain remedies.

Dr. Cox: That is to say people send the remedies for impartial analysis and the institute reports on them. I cannot see there is any objection to that; the proprietors take the risk if it is not a pure article.

The Chairman: Have you ever come across a proprietary drug or synthesis not previously known to the medical profession?—I never have.

Do you say that the greater part of these proprietary medicines have little or no therapeutic power whatever?—Yes, the greater part.

Doctors do prescribe proprietary medicines?—Yes; if a man brings to your knowledge a better combination than you have known, you prescribe it.

Are there any qualified medical men connected with the sale or manufacture of proprietary medicines?—I think not. We should certainly inquire into the position of any such with a view to reporting their conduct to the General Medical Council as being "infamous in a professional respect."

Do you remember instances in which after an interval you have analysed articles recommended by the JOURNAL to see that the composition is the same?—That is not within my knowledge.

Then practically you exercise no censorship over the constitution of the articles advertised in the JOURNAL?—I hope the Committee will see the difficulty. We do not want to commit ourselves to guaranteeing everything advertised in the JOURNAL.

The Chairman suggested that by recommending proprietary articles in the JOURNAL the Association made it difficult or impossible for the General Medical Council in the *Pharmacopoeia* to secure the use of an equivalent standard formula instead of a proprietary medicine.

Dr. Cox said there were some proprietary medicines which he personally preferred to any formula in the *Pharmacopoeia*; there was something in the method of preparation of some of them that made them more useful. In reply to a further question, the witness said that if a disclosure of the complete formula could not be secured by law, all the drugs that were active might be required to be stated. That would leave the proprietor a great deal of scope as to the method of making up, and he did not think the Association would be content with less. The publication of a list of deleterious drugs would be a step in the right direction.

The Chairman: People buy secret remedies, I suppose, because they are cheaper than medical attendance, and involve less trouble?—I do not think it is because they are cheaper. People think the advertisers have some mysterious cure the profession does not know of. As a rule, secret remedies are not cheaper than medical attendance. In the East End of London you get very good medical attendance for a shilling: you have to pay that for a proprietary medicine.

But it is very much simpler and cheaper to go into a shop and pay 1s. 1½d. for something, and avoid what is to some people the embarrassment of a medical examination and questioning?—That is to say, it involves none of the absolutely essential things.

But rightly or wrongly, is it not a fact that that accounts to a large extent for the great sale of these things?—No, sir; I submit to a large extent that is not the fact, because many of these remedies are very expensive. The prices proprietors get from the public are far higher than the medical profession gets.

They do not get these prices from the poorer classes?—Oh, yes, they do. I have known a labouring man spend the savings of several years on a silver-mounted truss, worth 15s. or 16s., and for which he paid £5 or £6.

Mr. Glyn Jones: May not a person lose part of his day's work in seeing the doctor?—In attending at a hospital he would lose time, but he could call on a doctor in the evening, after working hours.

The Chairman pointed out that, according to a return in 1911, 1½d. medicine stamps were sold to the extent of 31,000,000.

Dr. Cox replied that a very large amount was sold absolutely irrespective of price. People spent money to large amounts on proprietary medicine which they grudged spending on books, clothes, or boots.

Sir Philip Magnus: Or doctors' fees.

Dr. Cox: Doctors' fees, of course; that goes without saying.

The Chairman: What of the effect of the Insurance Act? When people get free medical attendance and free medicines, will that not greatly affect the sale of proprietary medicines?—I think and hope it will; but it will not affect those who buy them, because they think there is some mysterious secret about them.

Mr. Bathurst asked if Dr. Cox thought that the medical profession required such guidance as the advertisements in the JOURNAL were supposed to give them.

The reply was that from an experience as a general practitioner he had found the advertisements useful in bringing to his knowledge preparations that he had not seen before, and which he was prepared to put to the test, sometimes finding them useful.

Surely, after a very long and expensive education, medical men ought to be sufficiently equipped in medical knowledge not to have to depend upon advertisements in high-falutin language?—I suppose they ought, but even medical men are subject to the ordinary weaknesses of human nature, and they can be appealed to through the eye. It apparently served the purpose of the advertiser, and you must allow him some licence. We try to see that the advertisements are not too ridiculous or high-flown. Some readers, of course, would not look at an advertisement couched in such language.

Would it not be possible to provide in the body of the JOURNAL all the information of this kind that it is necessary for the profession to have?—Why should we not make money out of advertisements the same as other people, as long as we can do it with an easy conscience?

In reply to questions as to the Association's proposals for further legislation, and particularly with regard to the suggestion that a false description should be made an offence, Dr. Cox said he had not considered fully whether it should be a civil or criminal offence. The Association felt that merely to touch the pocket might not have the desired effect and that imprisonment might be necessary for the worst cases. If it was more effective that county councils should institute proceedings with the consent of a Government department, instead of placing the responsibility in the first instance with the Government department, he saw no objection to the adoption of that course.

Dr. Cox was not prepared to say that the bulk of the fraud upon the public was in connexion with drugs which purported to treat female ailments or the prevention of conception. A great deal of money was also spent on consumption cures, for example. He agreed that the people who were engaged in the former and more sinister traffic ought to be dealt with very rigorously.

Mr. Newton: Have you ever given a favourable editorial notice of a medicine not advertised in the JOURNAL?—Whether a medicine was advertised or not, if it was sent up for notice the same attention would be given to it. They are sometimes sent up by medical men as well as by the proprietors.

Have you ever given a bad notice of an article advertised?—We have given notices that the advertisers are not satisfied with.

Have you submitted a notice to the advertiser before you put it in?—I cannot say of my own knowledge, but, knowing the editor as I do, I should say it is very highly unlikely.

Dr. Lynch: If a doctor who has qualified after five years' study and who has his patient before him feels called upon to exercise the utmost care and prudence, how is it possible for a person having had no training and having no patient before him to prescribe at large?—It is impossible.

On the question of ethics, was the discovery of chloroform protected or patented?—No.

On the contrary, was it not the endeavour of those who found out the advantages of chloroform to make it as widely known as possible, without thought of reward to themselves?—It has always been the glory of the profession, of which it has been justifiably proud, that there has never been any attempt on the part of the profession to conceal a remedy or a new method of treatment.

Replying to Dr. Chapple, Dr. Cox said there were proprietary medicines to which the profession had no objection; those of which it approved claimed, not medicinal value so much as an art in the combination of drugs. They represented both the art of the doctor in dosage and medicinal value and of the pharmacist in the mixing of the ingredients. The medical profession encouraged every effort on the part of the pharmacist to produce the qualities of stability, compatibility and elegance in the combination of drugs. Many new drugs were of organic origin, and it was difficult to combine them in stable mixtures. To do so called for greater skill on the part of the pharmacist. The policy of the JOURNAL, as far as it could be carried out, was to give space to those preparations which expressed the pharmacist's art in obtaining more satisfactory combinations of drugs which had been proved to be valuable by the profession.

In reply to Mr. Cawley, as to the first proposal of the Association for new legislation, Dr. Cox agreed that the simple statement on the labels of the names, without the quantities, of the ingredients of proprietary medicines would go far to satisfy what was required. It was important to leave no loophole by permitting the name of any ingredient to be omitted.

Mr. Cawley: You think the ingredients should be mentioned?—At least that.

As to the circular accompanying the preparation and bearing the testimonials—with the qualifications but without the names—of medical men, to which reference had already been made, Dr. Cox remarked that if this wrapper reached the doctor he would not necessarily know that the same wrapper was going to the public. He knew many cases where the printed matter accompanying was quite different when the preparation was sent to a medical man from what it was when sent to the public. It was common knowledge to pharmacists, and certainly to the medical profession, that testimonials might be quite properly placed before the medical profession which would not properly be placed before the public.

Dr. Cox replied to further questions by Mr. Lawson as to the policy of the JOURNAL in accepting advertisements, and said that at the risk of seeming persistent he must make it clear that if the JOURNAL were to subject advertisements to extremely severe tests it would be in fact giving a guarantee of the preparation, and that it declined to do.

Mr. Lawson: But when you give an editorial notice you do give a guarantee?—We do not give a recommendation to the public. Of course, in many cases we know it is going to the public.

And that is equivalent to a warranty within the terms of the notice?—Yes, that the article is up to a certain standard, or was found useful in some cases.

Is it your object to confine the advertisement of certain preparations to your columns and not let the lay press have their share?—Oh no. Some may quite legitimately advertise in both.

You claim to dictate to people who advertise, the manner in which they shall advertise elsewhere?—We do not go so far as that; but if it is brought to our notice that exaggerated claims are made elsewhere we say the advertiser must choose between our journal and the others.

Can you conceive an advertisement in the lay press which will not lead at a certain point to self-medication?—Perhaps not, but there are very wide degrees.

What is the difference between a proprietor of a preparation who advertises directly in the lay press and one who advertises with you without indication of the composition of the preparation?—That never happens, because we always have an indication.

But the public does not get an indication?—We urge upon you to bring that about; we know it does not get an indication now.

You do not propose to set up a standard, but you want one set up for you?—Yes, and we would be glad to live up to such a standard. At present for commercial reasons we cannot do all we should like.

At the present time you are not much in advance of the average newspaper proprietor?—We are a very great deal in advance.

This being the conclusion of his examination, Dr. Cox stated that he had a considerable amount of material which he had intended to put before the Committee, but with which he did not propose to trouble them now. He wanted to make it plain that the examples the Association had given of ridiculous and fraudulent claims made for the preparations advertised to the public every day were mere samples from bulk. The Committee could be supplied with any quantity of them. He did not want to give the impression that the two or three ridiculous things he had read out were unusual; he could produce a score as bad or worse. He would hand in as a mere exhibit a typical selection from newspapers of recent date, containing statements that must make every man of the world believe that the advertisers were trading on the ignorance and credulity of the public.

The Chairman: I have to thank you, Dr. Cox, for the very long, careful, and extremely valuable evidence you have given.

Non-Secret Proprietary Remedies.

On June 27th Mr. E. F. Harrison, B.Sc., Ph.C., F.I.C., F.C.S., gave evidence. He said he was an independent analyst, and had been employed by the British Medical Association to make analyses of secret medicines. He was responsible for most of the analyses of proprietary medicines contained in the two books, *Secret Remedies* and *More Secret Remedies*, and was prepared to answer any questions that might be put to him with regard to the analyses. In his thirty years' chemical and pharmaceutical experience he had had occasion to consider the composition, advertisement, and sale of proprietary medicines from various points of view. It might perhaps be useful if he gave the Committee a brief summary of some of the points arising out of the subject-matter of the two books, which in his opinion appeared to show the necessity for further legislation. It was first of all necessary to distinguish between the different classes of proprietary medicines, for most of what he had to say applied to one class only. In the first place, there was a large number of proprietary but non-secret medicines. There was first the class of new chemical substances produced synthetically. These were usually prepared by a patent process, and sold under a protected trade-mark name. As an example of that class he mentioned antipyrin, which was manufactured under a patent and had a trade-mark name. During the life of that patent this was the monopoly of one firm. The patent had expired some years ago, and the article might be made now by any one. It was in the *British Pharmacopoeia*, and it might be regarded as a permanent and valuable addition to the materia medica. Other examples were urotropin and aspirin. In these cases the names were registered, but there was no monopoly in the processes by which the chemicals were produced. Urotropin was sold under at least a dozen names. There was also adrenine or epinephrine, the active principle of the suprarenal gland. In this case the process was patented,

but the name was not registered. A large number of proprietary medicines in this class had enriched and been valuable additions to medicine.

In reply to Mr. Newton, the witness said it was the process of manufacture that was patented. The number of proprietary articles in this class was very large. The reputation of a large proportion did not ultimately survive, but a substantial number of them survived and took an established place. The next class consisted of new combinations of old and well-known drugs. As an example of these he mentioned bismuth and pepsin mixtures, emulsions of petroleum and cod-liver oil. Other makers got to know the composition fairly accurately, and manufactured similar articles, sometimes quite as good and sometimes not so good as the original article. As soon as they came into general use formulae were published in the pharmaceutical press and elsewhere. In spite of that the original proprietor nearly always held his own commercially. That was the case to a very remarkable extent, even though the price of the original article was three or four times as much as other people asked for it. For instance, Hewlett's mist. bismuthi was listed at 10s. per pound and similar preparations were sold at 4s. per pound.

The Chairman: That is a fact worth noting in connexion with the provision of medicines under the National Insurance Act.

Mr. Haydn Jones asked if these preparations held their own because of the name.

Mr. Harrison said he thought it was because the original manufacturer had usually discovered some particular feature, or some special method of preparation which might not be shown by analysis.

Mr. Lawson: Is it not also due to the fact that being manufactured on a large scale it is probably more satisfactory than when it is made up casually?—Yes, sometimes, though competing articles are also often made up on a similarly large scale.

The Chairman: In some cases it might happen that a later preparation was really better?—Yes. Mr. Harrison added that this latter class had contributed to some extent to the enrichment of medicine.

Dr. Chapple: Is it not the case that, though the ingredients are published, the method of compounding the ingredients may remain the property of the original manufacturer?—Yes, except in so far as the ingenuity of competitors may find it out.

The Chairman: I suppose they would find it out by the method of trial and error?—Yes.

Mr. Harrison said the third class of proprietary and non-secret medicines consisted of those in which the full formula was disclosed except some trivial detail which was of no importance. Representative preparations of that class were "tabloid" preparations. The full formula was declared on the label, except perhaps some very small quantities of excipients. Special machines were used, but there was no secret in the general method. In all these three classes the fact that the composition was not secret or only partly secret did not prevent the medicine from being a very valuable paying property. There was an enormous capital invested in the production of these things, and very good profits were made. He mentioned this to show that secrecy was not essential to the retention of a valuable property in medicines.

Secret Proprietary Remedies.

Mr. Harrison now came to the large class of proprietary medicines in which the composition was secret, or nearly secret, or at any rate in regard to which no accurate or reliable information was supplied.

The Chairman: Then you regard the secret medicine as a medicine with regard to which no information is given by the manufacturer?—Yes, either no information or very little.

Mr. Harrison said that with regard to this fourth class of secret proprietary medicines the one characteristic which was common to them all was that they were intended for self-medication. The suggestions which were made to the public were, as a rule, strong and misleading. In this they were alike, but otherwise they varied very greatly indeed in their merits, in their price, and in almost every other respect. Having studied the advertisements of this class of medicine for many years he had found there were very few indeed in which considerable misrepresentation was not made. That misrepresentation was either in the nature of exaggerated claims or in some other form. The advertisements were such that it was almost impossible for the proprietor of a secret medicine to obtain a great sale unless exaggerated claims were made. Medicines otherwise innocent were apt to fall into exaggeration, being forced into it by the competition of less scrupulous makers.

Mr. Lawson: You mean that the advertisements must be in the language of advertisements?

Mr. Harrison said he would go a little further than that and say they must be in the language of patent medicine advertisements. (Laughter.) To summarize some of the principal charges which might be made against the worst articles of that kind—and the case for new legislation necessarily rested very largely on what was done in the worst cases—he would say that at present there was nothing to prevent quite ignorant persons without any medical or pharmaceutical qualification from making up a medicine of worthless or even harmful drugs, advertising it widely for the most serious complaints, guaranteeing a cure, and selling it at a price which was quite out of proportion to its cost. Actual misstatements on matters of fact were made freely, as well as statements which were not absolutely false, but were grossly misleading. Mr. Harrison proceeded to prove this statement point by point by quotations from *Secret Remedies* and *More Secret Remedies*. To show the ignorance of manufacturers, for instance, there was a statement that catarrh invariably created pleurisy, asthma, bronchitis, consumption, and various other complaints. On another page was a statement that no progress in medicine had been made for three centuries, and that tigers' tongues, rhinoceroses' horns, crabs' eyes, etc., form part of the materia medica now in vogue with the medical profession; another maker put forward the absurd statements that the white corpuscles of the blood are yeast cells and they accumulate in the brain during disease, that acetic acid is an absolute poison, and that no chemist has been able to analyse alcohol. Several other examples of gross ignorance were given. His next point was that these medicines might be composed of quite worthless ingredients. As illustrations of this he quoted from *Secret Remedies* a preparation which claimed to cure "all kidney diseases" which consisted of sugar only, and another claiming to cure almost everything in one dose which was composed entirely of potato flour.

Mr. Harrison gave instances of dangerous ingredients being contained in proprietary secret remedies, mentioning acetanilide, morphine, strychnine, lobelia, and powdered savin. As regards the serious diseases for which these remedies were put forward, in many cases guaranteeing cures, he gave a long list. Cures were definitely promised for cancer, consumption, diabetes, Bright's disease, and many others. One remedy was described as "a guaranteed cure for all blood diseases; it never fails to cure scrofula, cancerous ulcers, syphilis, gout, dropsy, etc." Another advertised: "Whatever you may be suffering from, don't worry; ——'s preparations are certain to cure you." To illustrate the point that the selling price might be very much in excess of any reasonable proportion of the cost price, Mr. Harrison mentioned that tuberculozyne sold for £2 10s., and the cost of the ingredients was 2½d. He gave instances of false statements being made with reference to the ingredients; for example, a preparation would be said to be purely vegetable, and mineral substances would be found. Statements would be misleading without being positively untrue. Cough pills were said not to contain opium, but analysis showed them to contain morphine, which was the principal constituent of opium. Kaputine was said to be free from a dangerous constituent to be found in other powders; nevertheless it was composed as to 96 per cent. of acetanilide.

In reply to the Chairman, who asked what was the proper dose of acetanilide, the witness said the *Pharmacopœia* dose, as altered in the present edition, was one to three grains. He next mentioned the variations of the quality and contents of proprietary secret remedies, due apparently to gross carelessness in preparation. Variations might also be made on account of alterations in the law. For instance, a headache powder which contained an ingredient making it illegal for anyone but a qualified

chemist to sell it was made up in one form for grocers and in another for chemists. The witness put in an analysis of Fenning's Fever Cure, mentioned by Dr. Cox; this was the remedy which claimed to cure several infectious diseases in from one to six doses. The medicine was taken in wineglass doses, and contained 1.4 per cent. by measure of nitric acid (*British Pharmacopoeia*) flavoured with peppermint—practically 48 minims of strong nitric acid to the bottleful.

The Chairman said the Committee had had this preparation analysed by the Government analyst, and the report stated that the preparation contained 2 per cent. of *British Pharmacopoeia* nitric acid.

Mr. Harrison explained that taking into consideration that his figures were by volume the results were practically identical, as the specific gravity of nitric acid was 1.42.

In reply to Sir Philip Magnus, the witness said he did not think any legislation was necessary to deal with proprietary medicines which were more or less fairly described and the ingredients of which were more or less fairly known. He thought that if legislation were to be effective it ought to have reference to secret remedies. It should not prevent sale altogether, although it might be directed to making gross and flagrant abuses impossible, by making it compulsory to declare on the label the names of all the principal ingredients. This would automatically kill the flagrant swindles of perfectly valueless things.

Sir Philip Magnus: Do you think the public would be prevented from purchasing, even if the ingredients were disclosed?—I think they would; the public has access to various sources of information. People might ask the family doctor or chemist, or write to one of those papers that supply information upon almost anything, to find out if a particular preparation was worth anything.

Sir Philip Magnus: They might do that already. Is it not the case that people buy these things because they do not want to consult a medical man? I am not so hopeful that it would have any effect to put the names of the ingredients on the label.

The witness replied that it was a common practice for customers to ask chemists whether advertised proprietary articles are good for various complaints, and if the contents were on the label chemists could express an opinion. At present he could only say, "How can I tell? I do not know what is in it," and the patient went away with the impression that there must be something in the preparation that the doctor or chemist did not know of. The effect of stating the ingredients would be to reduce the sale of the worst articles so much that it would no longer pay the makers to advertise. The better-class productions would be affected in only a minimum degree.

Sir Philip Magnus: Do you suggest that legislation should endeavour to prevent these extremely exaggerated statements?

The Witness: I think it would be possible to prepare a series of specific statements which it should be an offence to make. It might be made an offence to allege that a thing would cure a disease which admittedly could not be so cured, and it might be made the duty of some official department to keep an eye on these things and not leave them quite alone. In addition to the names of the ingredients, it should also be required that the quantities of certain ingredients should be stated. He would include poisons, dangerous drugs like acetanilid and alcohol, so that a patient should not unknowingly imbibe a considerable quantity.

Sir Philip Magnus: You think a Government officer might be empowered to institute proceedings against any manufacturer advertising a medicine which the medical faculty generally well know to be quite incapable of curing the disease it claims to cure?—Certainly, but there are so many difficulties in the way that it would be necessary to limit that to positive and definite statements. In America "misbranding" was made an offence; it was made illegal to state that a remedy would cure a disease if it was known to the medical profession that the disease was incurable in that way. But a case was taken to the Supreme Court, which held that it was a matter of opinion whether a medicine would cure a disease. Since then no prosecutions had been brought.

A prosecution for a deliberately false statement might be brought under the Food and Drugs Act?—Yes, if the exemption of proprietary medicines were withdrawn, the case would be met. The local authority, which takes samples of butter, could take samples of proprietary medicines.

In reply to Dr. Lynch the witness agreed that there were well-defined limits to the amount of information one could get by analysis, especially with regard to vegetable substances. That reservation was not serious, because nearly all the active constituents of drugs were definite substances which could be separated and identified. In Germany there was the greatest activity in the preparation of synthetic drugs. Some of these establishments were of the very highest class with regard to scientific equipment, and a very large amount of scientific knowledge emanated from them. There was at least one establishment in this country where a considerable research laboratory existed. He was convinced from his analyses that some secret remedies were sheer frauds. The public was spending its money, not on anything of real value, but on account of the impressions produced by the advertisements.

Dr. Lynch: Do you think that it would be advisable to absolutely prohibit the assertion that any medicine will cure cancer?

The Witness: I would certainly prohibit it as regards any secret medicine, but it would never do to prohibit it with regard to a substance about which the statement might be made in good faith.

Replying to Dr. Chapple, Mr. Harrison agreed that any chemical substance or any drug must start its career in the hands of a medical man who had observed its effects; the genesis of knowledge of medicine must start with the patient and the skilled observer.

Dr. Chapple: Does not your first suggestion for new legislation include the statement on the label of the quantities as well as the names of the ingredients?

The Witness: I have to distinguish between the opinions of the British Medical Association and my own. My own opinion is that that proposal goes further than is necessary, and might inflict injustice. I would not have the quantities stated except in the case of poisons. If the maker declared the ingredients he would be debarred from making extraordinary claims in his advertisements.

How would the consumer in the East End of London be affected?—I think the knowledge would gradually filter down to the least educated. If the maker had to declare on the label that the ingredients of a preparation were, say, nitric acid and peppermint water, the consumer in the East End, to whom a shilling is a consideration, would ask if he could get it cheaper.

The great mass of the traffic is amongst the poor and ignorant, to whom these exaggerated statements appeal?—I hardly think the great bulk is amongst the poor. The sale is pretty evenly distributed through the whole population.

The Chairman: I have received through the post, as we all do, a pamphlet of a certain secret remedy. I was amazed at the list of testimonials given by people who could be described as members of the upper classes.

The Witness: I think that the more educated classes are as easily gulled as the uneducated.

Mr. Cawley: I think you admit that certain vegetable compounds are incapable of analysis?—Certainly.

Does not that show that even the statement on the outside of the bottle of the ingredients would be ineffective, because it may be said that the compound is made from some root, of which the name is given, and it would be impossible to show that it does not exist in the preparation?—It would not be very difficult for legislation to make it clear that the name given must be a definite drug.

Mr. Harry Lawson asked whether all the patent medicines Mr. Harrison had suggested to the British Medical Association Committee had been examined and reported upon in *Secret Remedies*. The witness replied that not a single one had been eliminated from the list.

Mr. Lawson said that it had been suggested to him that something like 50 per cent. of the remedies dealt with in the book were almost unknown.

Witness replied that some were not very well known, but nothing like the percentage named. He then explained in detail the method in which the remedies to be analysed were selected, the idea being to take representatives of each group.

Mr. Lawson asked how it was that not a single one of

the proprietary medicines advertised in the British Medical Journal appeared in the book.

Mr. Harrison said the remedies advertised in the British Medical Journal came into a very different class.

Mr. Lawson could not understand why such a medicine as Kutnow's Powder was not analysed, and Mr. Harrison replied that he had never looked upon Kutnow's Powder as a secret medicine. In reply to further questions; the witness said he did not desire to interfere with the legitimate profits of those selling genuine proprietary medicines. The publication of the ingredients on the label would enable the chemist to use discrimination in the sale. Mr. Lawson suggested that even if the formula were published on the label the public would be none the wiser, but Mr. Harrison thought it would act as a very great deterrent. He admitted that many secret remedies might be from quite useful formulae.

Mr. Lawson asked what objection he had, therefore, to these useful medicines being made known by advertisement to the public. Mr. Harrison replied that what was made known was "Smith's Pills," not the formula for them.

Mr. Newton asked Mr. Harrison whether he would be prepared to separate secret medicines into different groups of varying value. Mr. Harrison said he would; it would not be difficult with the extremes, but it would be very difficult with those just on the border line. He was prepared to draw up such a list of secret remedies whose suppression should be undertaken, but there would be difficulty in drawing the line.

The Chairman asked the witness if he saw any objection to advertising a preparation containing dilute nitric acid flavoured with peppermint as a fever cure. Mr. Harrison thought it might be called a "fever cure" simply, or, as the word "cure" was open to objection, it might be called a "mixture for fevers." He objected to all secret remedies which were advertised as cures for cancer, consumption, rupture, diabetes, or Bright's disease.

Mr. Newton asked as to the attitude of retail chemists with regard to the sale of proprietary medicines. Could they sell below 1s. 1½d.? Mr. Harrison replied that the majority of the proprietary medicines which had a large sale protected the price. The discount was not very considerable, but it compared tolerably well with other articles sold in the course of trade. Generally speaking, the chemist did not encourage the trade in proprietary medicines.

Mr. Harrison's evidence had not concluded when the Committee adjourned until Thursday, July 4th.

MOTOR CARS FOR MEDICAL MEN.

Cheap Cars.

We are frequently asked to advise members upon the purchase of cheap cars, many of them of American manufacture. We cannot undertake to discriminate between individual patterns, but may make the following general observations. By standardization of all of the parts, by manufacturing in large numbers, and by not varying the patterns in the endeavour to effect, year by year, improvements, the American makers have succeeded in turning out cars which are "cheap"—that is to say, in turning out an article which is good for the price asked for it. But no one who is familiar with the details of a motor car can expect to get for a very low price the best that can be produced, and the difference begins to be felt after the car has had a good deal of wear. The difference in the cost of production of parts which are rapidly machined out of "quick" steel and those which are carefully ground after being hardened, etc., is very great, yet no difference will be observed in their running when new. To give an example, one of our correspondents, himself something of a mechanic, has a 16 horse-power car which is now 8 years old, has been heavily but carefully used, and still runs almost as well as ever. Upon this car only £24 have been expended in renewals in eight years; but this was an expensive car originally, in which every part was made regardless of cost where greater excellence could thus be attained. The makers of this car, to whom motor building was only a subsidiary part of their business, have given up building cars because they would not lower the quality and could not compete in price with the flood of cheap cars; they continue, however, to build a few cars for old customers, but they do not advertise, and have no agents. It may, and no doubt does, answer the purpose of some to buy a cheap car and wear it out; against this we have nothing to say, and indeed we know of instances of the possessors of a high-class car buying a cheap car for rough work in order to spare their other. But it cannot be too plainly understood that the extra cost of a high-class car is not paying merely for the name, but that there has been put into it value in the form of additional highly skilled work and expensive material.

LITERARY NOTES.

The education of epileptic children has always been a matter of considerable difficulty. The very nature of their disease, which prevents them from mingling on an equal footing with other children, renders these little unfortunates totally unfit for the ordinary routine of home or school life; and until the last few months the children of the well-to-do have been in many respects actually worse off than their fellow sufferers in the poorer classes, who could at least gain admittance to homes and institutions where they would have every opportunity of developing whatever powers and capacities they happened to possess. It was to meet the requirements of a hitherto neglected class, therefore, that a school for the epileptic sons of gentlefolks was opened last autumn at the David Lewis Epileptic Colony at Alderley Edge, in Cheshire, of which an interesting account by Dr. Alan McDougall, the director of the colony, has been given in the May number of *The Child*. According to Dr. McDougall, Colthurst House School is the first of its kind ever founded in this country. It is in no sense of the word a sanatorium (dangerous or imbecile children being rigidly excluded), but a real school, where the boys are not only thoroughly well grounded in the ordinary school subjects, but, what is even more important, are trained in self-reliance and other manly virtues, and encouraged to take part in the various games and sports which bulk so largely in the life of the average schoolboy. It is hardly necessary to add that though "coddling" is strictly taboo, the most careful attention is paid to the mental and physical requirements of each individual pupil; whilst even during their sleep the boys are under close supervision, the dormitories being provided with a night attendant fully qualified to deal with any case of sudden illness. The pioneer work done by this establishment cannot be too highly commended, and the success of the experiment gives reason to hope that Colthurst House School is but the precursor of a host of similar institutions scattered throughout the length and breadth of the land. A far more famous, though very different, educational establishment is the great public school of Haileybury, a brief outline of whose history, by the Rev. L. S. Milford, has also appeared in the May number of *The Child*. The same number also contains an excellent article by Dr. Mary Sutton Macy on the upbringing of a child during the first three years of life, and a short account by Miss Elsie M. Zimmern of the new Nursing Training College at Hackney; whilst a delightful study of "The Infant Mind" has been contributed by Miss J. St. Clair Henderson, head mistress of the Acton Lane Schools. Any one who has had experience of the extraordinarily disconcerting reasoning of a small child will sympathize with the anxious mother mentioned by Miss Henderson, who, on being informed by her four year old son that he was drawing God, tried to explain that he could not do so "because no one has seen God, and so we do not know what He is like. 'Oh, well,' replied Jack, calmly going on drawing, 'You'll know all about Him when I'm done!'"

Life, Death, and Immortality is the title of a little book by Dr. W. H. Thomson, Consulting Physician to the Roosevelt Hospital. (New York and London: Funk and Wagnalls Company, 1911.) The position taken up by the author may be gathered from the following sentence: "There is something almost pathetic in the conclusions of Huxley and some of his contemporaries that, because they had shown how man's body had been preceded by connected stages of evolution up to the ape's physical frame, therefore Man was thus accounted for by science! And to this day many are under the delusion that the animal Homo can explain the person Man." The booklet may fairly be described as a plea against the doctrines of materialism. It is somewhat discursively written, and to us it does not seem very convincing in argument. The author becomes more and more theological as he gets further into his subject, and discussions on the Resurrection of the body and Heaven as described in the Bible are outside our province. To some readers, however, the book may appeal.

British Medical Association.

EIGHTIETH ANNUAL MEETING, LIVERPOOL, JULY, 1912.

PROGRAMME OF BUSINESS.

President: Professor ROBERT SAUNDBY, M.D., LL.D., F.R.C.P., Professor of Medicine, University of Birmingham.

President-elect: Sir JAMES BARR, M.D., LL.D., F.R.S.E., Consulting Physician, Royal Infirmary, Liverpool.

Chairman of Representative Meetings: EWEN JOHN MACLEAN, M.D., M.Ch., M.R.C.P.Lond., F.R.S.E., Gynaecologist, Cardiff Infirmary.

Chairman of Council: JAMES ALEXANDER MACDONALD, M.D., LL.D., M.Ch., R.U.I., Honorary Physician, Taunton and Somerset Hospital, Taunton.

Treasurer: EDWIN RAYNER, M.D.Lond., F.R.C.S., Consulting Surgeon, Stockport Infirmary, Stockport.

The Eightieth Annual Meeting of the British Medical Association will be held in Liverpool in July, 1912. The President's Address will be delivered on Tuesday, July 23rd, and the Sections will meet on the three following days. The Annual Representative Meeting will begin on Friday, July 19th, 1912.

The Address in Medicine will be delivered by GEORGE ALEXANDER GIBSON, M.D., D.Sc., LL.D., F.R.C.P.Edin., Physician, Edinburgh Royal Infirmary.

The Address in Surgery will be delivered by FRANK THOMAS PAUL, Ch.M., F.R.C.S., Surgeon, Liverpool Royal Infirmary.

THE SECTIONS.

The scientific business of the Meeting will be conducted in twenty Sections, which will meet on Wednesday, July 24th, Thursday, July 25th, and Friday, July 26th.

The President, Vice-President, and Honorary Secretary of each Section constitute a Committee of Reference for that Section, and exercise the power of inviting, accepting, or declining any paper, and of arranging the order in which accepted papers shall be read. Communications with respect to papers should be addressed to one of the Honorary Secretaries.

A paper read in the Section must not exceed fifteen minutes, and no subsequent speech must exceed ten minutes.

Papers read are the property of the British Medical Association, and cannot be published elsewhere than in the BRITISH MEDICAL JOURNAL *without special permission.*

The following twenty Sections have been authorized by the Council:

ANAESTHETICS.

President: DUDLEY W. BUXTON, M.D., B.S., London.

Vice-Presidents: F. W. BAILEY, M.R.C.S., Liverpool; W. FINGLAND, L.R.C.P., Liverpool; W. J. MCCARDIE, M.B., Birmingham.

Honorary Secretaries: V. C. DE BOINVILLE, M.D., South Grange, Aigburth Road, Liverpool; C. C. BRAINE, F.R.C.S., 26, Wimpole Street, W.

Wednesday, July 24th, 10 a.m.—Discussion on Intravenous Infusion Anaesthesia. To be opened by Mr. FELIX ROOD; followed by Messrs. G. A. H. Barton and V. G. L. Fielden.

11 a.m.—Discussion on the Importance of Affording the Anaesthetist an Opportunity of making a Thorough Examination of the Patient some days previous to a Contemplated Operation, and after the Nature of the Operation has been Disclosed. To be opened by Mr ALEXANDER WILSON; followed by Messrs. L. Kirby Thomas, J. W. King, and Sydney Haynes.

The following is a *précis* of the paper introductory of the first discussion:

The origin and history of the intravenous infusion method of administration. Earlier types of apparatus and improved forms lately devised. Technique of method now generally employed. Summary of a number of cases. The position this form of anaesthesia occupies and is likely to occupy in the clinical practice of anaesthesia.

The following is a *précis* of the paper introductory of the second discussion:

The advantages claimed are: More accuracy in selecting the anaesthetic or analgesic, and the methods which will best fulfil the purposes of (1) safeguarding the patient by minimizing operative shock, preventing or lessening post-operative effects—that is, acetonaemia, glycosuria, pulmonary complications; (2) produce the best results for the surgeon and so enable him to do the utmost for the patient in the shortest possible time. The methods suitable for special regions and special types of operation may be grouped as: (*a*) Intratracheal insufflation of ether; (*b*) intravenous infusion; (*c*) rectal injection, or irrigation with ether in saline; (*d*) inhalation after alkaloids; (*e*) intrathecal injection; (*f*) various methods of local analgesia. The paper also invites members to state what factors, as a result of their examination, would influence them in selecting one of the above methods.

Thursday, July 25th, 10 a.m.—Discussion on the Comparison of Methods Employed for Inducing Anaesthesia and Analgesia respectively, with Special Reference to After-Effects. To be opened by Mr. C. A. LEEDHAM-GREEN; followed by Messrs. H. M. Page, G. A. H. Barton, and Sydney Haynes.

The following is a *précis* of the opening paper:

(A) Methods: Anaesthesia by (1) ether, (2) chloroform; analgesia by (1) intradural injection, (2) local infiltration, (3) regional.

(B) After-effects—incidence of fatality—respiratory—circulatory. Metabolism—for example, toxaemia. Renal.

Papers:

EHRENFRIED, Dr. (Boston, U.S.A.): The Intratracheal Administration of Ether. Accompanied by a demonstration of an apparatus for the purpose.

KELLY, Mr. R. E.: The Intratracheal Administration of Ether by a Modified Elsberg's Apparatus; with Records of Cases.

Friday, July 26th, 10 a.m.—Discussion on Employment of Alkaloidal Bodies prior to Inhalation, Infusion or Subdural Injection with a view to abrogating Deleterious After-Effects. To be opened by Mr. F. W. BAILEY; followed by Messrs. G. S. Hett, L. Kirkby Thomas, G. A. H. Barton, V. G. L. Fielden, and J. W. King.

The following is a *précis* of the opening paper: Alkaloidal bodies administered before anaesthesia, and their choice. Advisability or otherwise of adopting them in all cases. Periods of administration. After-effects prior, during, and subsequently to complete anaesthesia.

11 a.m.—Paper:

APPERLEY, Dr. W. R. E.: The Effect of Ether and Chloroform on the Liver and Kidneys in Health and in Certain Infective Conditions.

The Committee of the Pathological Museum will devote a section to an exhibition of modern anaesthetic apparatus. The Committee is anxious to gather together a thoroughly representative collection, and invites members to send as soon as possible a list of the exhibits they may desire to make to Dr. Ernest Glynn, Honorary Secretary of the Museum Committee, The University, Liverpool.

ANATOMY.

President: WILLIAM WRIGHT, M.B., D.Sc., F.R.C.S., London Hospital Medical School.

Vice-Presidents: D. DOUGLAS-CRAWFORD, M.B., F.R.C.S., Liverpool; Professor A. C. GEDDES, M.D., Dublin; Professor G. ELLIOT SMITH, M.A., M.D., F.R.S., Manchester; A. MACPHAIL, M.B., C.M., London.

Honorary Secretaries: W. P. GOWLAND, M.D., 379, Edge Lane, Liverpool; S. E. WHITNALL, M.A., M.B., The Old Rectory Farm, Kidlington, Oxford.

Members desirous of giving demonstrations or showing exhibits are requested to forward their specimens, apparatus, etc., to the Honorary Local Secretary. A room will be set apart in the University for the purpose. Every care will be taken of such material and it will be returned to the owner after the meeting.

Wednesday, July 24th.—Discussion on Development and Growth of Bone, Normal and Abnormal. To be opened by Sir WILLIAM MACEWEN, F.R.S., F.R.C.S.

Thursday, July 25th.—Papers.

Friday, July 26th.—Discussion (in conjunction with Electro-Therapeutic Section) on the Normal Stomach. To be opened by Dr. Hertz.

Papers.

BACTERIOLOGY.

President: Professor James Ritchie, M.A., B.Sc., M.D., Royal College of Physicians Laboratory, Edinburgh.

Vice-Presidents: Professor J. M. Beattie, M.A., M.D., University, Sheffield; J. C. G. Ledingham, M.A., D.Sc., M.B., Lister Institute, Chelsea Gardens, S.W.; Professor R. Tanner Hewlett, M.D., F.R.C.P., King's College, London.

Honorary Secretaries: Professor E. Emrys-Roberts, M.D., University College of South Wales and Monmouthshire, Cardiff; R. S. Williams, M.B., Hygienic Laboratories, Ashton Hall, University, Liverpool; T. A. Johnston, M.D., 19, De Montfort Street, Leicester.

The following is the provisional programme:

Wednesday, July 24th.—Joint Discussion with the Section of State Medicine on *B. Coli*, its Varieties and the Significance of their Occurrence in Water Supplies. To be introduced by Drs. A. C. Houston, W. G. Savage, R. M. Buchanan, and W. Wright.

The following is a synopsis of Dr. Houston's paper:

Introduction: Experiments showing that *B. coli* may be absent from 10,000 c.cm. of a water of known purity and that if $\frac{1}{10000}$ c.cm. of sewage be added to 10,000 c.cm. of sterile water *B. coli* can be isolated from the mixture. Requisites for bacterial tests of pollution: The microbe-indicator should be superabundant in excremental matters; absence, relatively speaking, from pure waters; and a decadent microbe when divorced from the animal body. Negative aspects of the *B. coli* test: A water containing no *B. coli* in 100 c.cm. may be said to be 10 million times less impure than sewage. Positive aspects of the *B. coli* test: standards considered and their advantages and disadvantages fully dealt with. The *B. coli* test as an indicator of the efficiency of purification processes: The *B. coli* test, the best test of the efficiency of a filtration process or of the adequacy of storage or of the perfection of a sterilization process. The *B. coli* test in relation to other bacterial tests: without disparaging other supplemental or corroborative tests, the *B. coli* test may be said to be the "sheet-anchor" of practical water bacteriologists. Objections urged against the value of the *B. coli* test: Objections, real or assumed, considered at some length. Classification of results: The "lactose + indol +" microbes classified according to their presence in 100, 10, 1, 0.1, and lesser amounts of water. The *B. coli* test considered to be of chief value as a quantitatave enumeration of the number of "lactose + indol +" microbes in water. Varieties of *B. coli*: The "lactose + indol +" *B. coli* split up into a number of varieties by the application of various additional tests. Methods: Primary, secondary and tertiary media fully considered. Summary of conclusions.

Thursday, July 25th.—Papers on bacteriological subjects.

Friday, July 26th.—Discussion on the Standardization and Control of Vaccines, to be introduced by Drs. J. Eyre and J. Freeman, followed by Drs. L. C. Peel Ritchie, Carmalt Jones, Otto Grünbaum, Ralph Stockman, and others.

DERMATOLOGY.

President: Professor W. G. Smith, M.D., F.R.C.P., Dublin.

Vice-Presidents: Professor R. A. Bolam, M.D., M.R.C.P., Newcastle-on-Tyne; H. L. Roberts, M.D., Liverpool; G. G. S. Stopford-Taylor, M.D., Liverpool.

Honorary Secretaries: R. W. McKenna, M.A., M.D., 26, Rodney Street, Liverpool; J. E. R. McDonagh, F.R.C.S., 19, Harley Street, London, W.; E, B. Purdon, M.B., 60, Packenham Place, Belfast.

The following preliminary arrangements have been made:

Wednesday, July 24th.—Discussion on The Nature, Causation and Treatment of Seborrhoea and Acne. To be opened by Dr. Arthur Whitfield (London); followed by Drs. Phineas Abraham, A. Fleming, A. J. Hall, R. Sabouraud (Paris), Stopford-Taylor, and J. Goodwin Tomkinson. The following is an abstract of the opening paper:

Seborrhoea is a constitutional condition, and is usually associated with hyperidrosis. It is understood, therefore, that the two errors of secretion are dealt with together. The chief causes of seborrhoea are (1) Adolescence. The sebaceous glands begin to assume their function at puberty and, as in the case of other glands at the beginning of their functional activity, are apt to secrete irregularly. (2) Certain articles of food, especially carbohydrates and fats, increase the secretion of sebaceous material. (3) Alimentary intoxication and irritation of the alimentary tract also increase sebaceous secretion. (4) Hot, stagnant atmosphere with a high percentage of moisture is also a cause. (5) Certain individuals and families are distinguished by a very abundant sebaceous secretion. Upon this excessive and possibly abnormal secretion various infections may be superimposed. The infection of the mouth of the follicle by the microbacillus of Sabouraud is the determining cause of the comedo, which is produced by the successive attempts of the epithelium of the mouth of the follicle to encyst the foreign body. By the superadded infection of the *Staphylococcus pyogenes*, generally the *Staphylococcus pyogenes albus*, suppuration is induced in the follicle with the production of the pustular eruption. On the other hand, free growth of the non-liquefying staphylococcus (*Coccus butyricus*) results in a toxic inflammation of the skin and gives rise to eczematous eruptions. Infection of the horny layer by the bottle bacillus may occur in seborrhoea, and give rise to extensive desquamation, but this organism not uncommonly infects the epidermis in the absence of seborrhoea, when it produces a dry, desquamative catarrh. Treatment may consist of the use of antiseborrhoeic measures (fresh air, *x* rays, diet, certain drugs such as sulphur) and the combating of the infections by the local use of antiseptics or the constitutional immunization by means of appropriate vaccines.

On Thursday, July 25th, and Friday, July 26th, arrangements will be made for the demonstration of cases before the papers are read.

The following papers have been accepted:

de Beurmann, Dr. Lucien (Paris). Sporotrichosis.
Bunch, Dr. J. L. Naevi and their Treatment; based on 2,000 Cases.
McDonagh, Mr. A Rational Method of Treating Syphilis.
Meachen, Dr. G. Norman. Morbid Conditions of the Nails: A Plea for their more Systematic Study.
Savatard, Dr. Louis. (1) Sebaceous Carcinoma and its Relation to Rodent Ulcer. (2) Sarcoma on Lupus Scar Tissue.
Tomkinson, Dr. J. Goodwin. The Vacuum Electrode in Neurodermatitis.
Madden, Professor (Cairo). A Case of Papilliform Lesions (Lymphangiomata?) of the Scrotum, with Multiple Petechial Spots on the Trunk and Limbs.
Walsh, Dr. David. Traumatic Dermatitis and Other Cutaneous Lesions in Relation to Cardio-Vascular Conditions.
Stopford-Taylor, Dr. Types of Dermatitis Seborrhoeica.
Oram, Dr. Notes on a Case of Xanthoma.

The Committee of the Pathological Museum has decided to devote a section to Dermatological exhibits, and is anxious to gather together a thoroughly representative collection. Any plates, photographs, casts, microscopical specimens or cultures illustrating rare or interesting cases, or recent research, will be welcomed, but the Committee would like to have as complete an exhibition as possible of the results of treatment with carbon dioxide snow, and also of syphilitic and tuberculous affections of the skin.

Intending contributors are invited to send the list of the exhibits they desire to make to Dr. Ernest Glynn, Secretary of the Museum Committee, The University, Liverpool.

DISEASES OF CHILDREN, INCLUDING ORTHOPAEDICS.

President: Robert Jones, Ch.M., F.R.C.S.E., Liverpool.

Vice-Presidents: Edred M. Corner, M.A., F.R.C.S., London; P. Davidson, M.A., M.B., Liverpool; C. J. Macalister, M.D., F.R.C.P., Liverpool; T. H. Openshaw, C.M.G., M.S., F.R.C.S., London.

Honorary Secretaries: R. C Dun, M.B., B.Sc., F.R.C.S., 73, Rodney Street, Liverpool; N. P. Marsh, M.B., 7, Abercromby Square, Liverpool; Clive Riviere, M.D., F.R.C.P., 19, Queen Anne Street, London, W.

The following subjects have been selected for discussion:

Wednesday, July 24th.—Discussion on the After-results of the Major Operations for Tuberculous Disease of Joints. To be opened by Mr. H. J. STILES, F.R.C.S.Edin.; followed by Messrs. A. H. Tubby, R. C. Elmslie, H. S. Clogg, Douglas Drew, E. Grey Turner (Newcastle), H. C. Morton (Clifton), G. H. Edington (Glasgow).

Thursday, July 25th.—(1) Discussion on the Dyspepsias of Childhood after the Age of Infancy. To be opened by Dr. ROBERT HUTCHISON; followed by Drs. Edmund Cautley, Dingwall Fordyce, F. C. Eve, and Mr. Edred Corner.

The following is a syllabus of the opening remarks by Dr. ROBERT HUTCHISON:

Dyspepsia after the period of infancy may be due to disorder of function (1) in the stomach, (2) in the intestine, (3) in the liver. Clinically such disorders often exist in combination. *Gastric Dyspepsia:* It is admitted that dyspepsia from organic disease of the stomach is rare in childhood. It is open to discussion whether gastritis is a possible exception to this rule. Functional gastric disorders may affect (*a*) secretion, (*b*) motility, (*c*) sensibility. The absence of test-meal evidence makes it difficult to dogmatize as to the frequency of disorders of secretion, and more evidence of this sort is much needed, but it is probable that both hyperchlorhydria and achylia occur. It is suggested, however, that the commonest functional affection of the stomach at this period is a defect of motility (atonic dyspepsia). Disorder of sensibility in the direction of a hyperaesthesia (gastralgia) may occur, but in the writer's opinion is not common, and its existence is impossible to prove. *Intestinal Dyspepsia:* This is, perhaps, the commonest form of digestive disorder in childhood, and results in such symptoms as flatulence, colic, constipation and diarrhoea, and "food fever." The pathology of intestinal dyspepsia is obscure. Discussion may be directed to the following hypotheses: (1) That it is due to defect of certain ferments; (2) that it results from the presence of an abnormal intestinal flora; (3) that it is the consequence of a relative excess of one nutritive constituent (carbohydrates) in the food. The writer favours the last of these views. *Hepatic Dyspepsia:* Disorder of the liver may reasonably be inferred when symptoms of dyspepsia occur along with a comparative absence of colouring matter in the stools. It will be generally admitted that this is not an uncommon occurrence in childhood, and its relation to such definite clinical conditions as "acholia," "periodic vomiting," "migraine," and "bilious attacks" is worth discussing. The exact nature of the disorder of liver function in these cases is obscure. Is it the result (1) of a primary functional arrest of bile secretion, or (2) of a temporary overloading of the liver cells with glycogen or fat? The *pros* and *cons* of these views. Mode in which these different basal types of disordered function are combined to make up the well-recognized clinical forms of dyspepsia—for example, "mucous disease." As regards the *etiology* of dyspepsia in childhood, stress must be laid upon the importance of predisposition (congenital neurasthenia, "morbus asthenias") as a factor. It will be suggested that the importance of dental caries is overestimated, and that amongst dietetic causes the chief is an excessive use of carbohydrate foods and slops. The part played by physical and mental overstrain must also be emphasized. In discussing *treatment* the relative importance of general and local treatment must be considered, and it is contended that the former is by far the more important, and involves regulation of the whole life of the child. The writer is convinced of the immense value of "change of air" in treatment, but its *modus operandi* is a subject for discussion. Finally, the two propositions will be laid down that, of medicinal means *aperients*, and of dietetic measures *reduction of carbohydrates*, are a long way the most useful.

(2) Papers:

LAPAGE, Dr. C. Paget. Tuberculous Infection and Tuberculous Disease in Infancy and Childhood.
STOELTZNER, Professor (Halle). Cod-Liver Oil and Phosphorus in the Treatment of Rickets.
ELMSLIE, Mr. R. C. Fibrous and Fibro-Cystic Osteitis.
EDINGTON, Mr. G. H. Imperforate Anus with Peritoneo-Scrotal Orifice.
SIMPSON, Mr. G. C. E., and Mr. Naughton DUNN. On Spasmodic Contraction of the Peroneal Muscles in Flat-foot.
KELLETT SMITH, Mr. J. S. Some Principles in the Treatment of Lateral Curvature of the Spine by Exercise.
EVE, Dr. F. C. A System of Printed Anamnesis Questions for Children Out-patients filled in by the Nurse.
TUBBY, Mr. A. H. A Method of Operating for Webbed Fingers.

Friday, July 26th.—Papers.

ELECTRO-THERAPEUTICS.

President: C. THURSTAN HOLLAND, M.R.C.S., Liverpool.

Vice-Presidents: A. E. BARCLAY, M.A., M.R.C.S., Manchester; DAVID MORGAN, M.B., Liverpool; SAMUEL SLOAN, M.D., F.F.P.S., Glasgow.

Honorary Secretaries: ROBERT KNOX, M.D., 7, Harley Street, London; W. C. ORAM, B.A., M.D., Prospect, Allerton Road, Mossley Hill, Liverpool.

The following are the provisional arrangements:

Wednesday, July 24th.—Address by Professor RUTHERFORD on the Chemical Actions of Radiations. Papers on allied subjects.

Papers:

SMITH, Dr. E. Bellingham (London). The Physiological Action of Radium on Normal Tissues and on Cancer.
SHAW Mr. Ernest H. (London). The Action of Radium and *X* Rays upon Malignant Growths.
FINZI, Dr. N. S. (London). The Type of Case Likely to be Benefited by Radium Treatment.
ARMSTRONG, Dr. W. (Buxton). On the Therapy of the Radio-Oxygen Bath.
HOWLETT, Mr. E. H. (Hull). Standardization of Radium Dosage.

Thursday, July 25th.—Discussion of Ionic Medication, to be opened by Dr. LEWIS JONES (London).

Papers:

HAËNISCH, Dr. (Hamburg). On the *X*-Ray Treatment of Uterine Fibroids.
WEBB, Dr J. Curtiss (London). The Treatment of Haemorrhoids and Other Diseases of the Lower Bowel by Electro-Therapy.
SLOAN, Dr. Samuel (Glasgow). Experiments on the Physics of Medical Ionization.
STONEY, Dr. Ada F. (London). On the Results of Treating Exophthalmic Goitre with *X* Rays.
HERNAMAN-JOHNSON, Dr. F. (Bishop Auckland). An Enquiry into the Causes of Failure of *X*-ray Treatment in Deep-Seated Cancer.
RAYNOR, Dr. A. E. (Preston). The Treatment of Hypertrichosis by *X* Rays.

Friday, July 26th.—Joint discussion, in conjunction with the Section of Anatomy, on the Normal Stomach, to be opened by Dr. A. F. HERTZ (London).

Papers:

JORDAN, Dr. A. C. (London). Peribronchial Phthisis.
SCOTT, Mr. Gilbert (London). Cervical Ribs.
BAILEY, Dr. C. Fred (Brighton). Stereoscopic Radiography as a Routine Practice.
WALSHAM, Dr. Hugh (London). Aortic Aneurysm.
MORTON, Dr. E. Reginald (London). The *X*-ray Diagnosis of Some Forms of Arthritis.

In connexion with the Pathological Museum there will be an Exhibition of Radiographs (negatives and prints) of subjects of special interest; also photographs of cases treated by Electro-therapeutic Methods, *X* Rays and Radium, and members desirous of exhibiting are requested to communicate with Dr. Oram.

GYNAECOLOGY AND OBSTETRICS.

President: Professor HENRY BRIGGS, M.B., F.R.C.S., Liverpool.

Vice-Presidents: W. W. CHIPMAN, M.D., Montreal; JOHN EDWARD GEMMELL, M.B., Liverpool; THOS. BABINGTON GRIMSDALE, B.A., M.B., Liverpool; Professor JOHN BENJAMIN HELLIER, M.D., Leeds; MARY HANNAH FRANCES IVENS, M.B., M.S., Liverpool; JOHN FURNEAUX JORDAN, M.B., F.R.C.S., Birmingham.

Honorary Secretaries: ARTHUR JOHN WALLACE, M.D., 1, Gambier Terrace, Liverpool; Assistant Professor DAVID SHANNON, M.B., 270, Bath Street, Glasgow; BETHEL ALBERT HERBERT SOLOMONS, M.B., Rotunda Hospital, Dublin.

The Committee have arranged to hold two discussions:

(*a*) Joint discussion with the Section of Pathology on Eclampsia. To be opened by (1) Dr. J. W. BALLANTYNE (Etiology); (2) Dr. J. H. TEACHER (Morbid Anatomy);

(3) Sir WILLIAM SMYLY (Therapeutic Applications of recent research on the subject), followed by Dr. F. W. N. Haultain.

The following are abstracts of the opening papers:

1. Dr. J. W. BALLANTYNE: Etiology of eclampsia; the cause and mode of action of the cause; etiology and pathogenesis; pregnancy is the great cause; the breakdown in the intricate symbiosis of gestation; the strain and the stress of it; the labyrinth of pathogenetic theories; "the reason of the cause and the wherefore of the why"; intrauterine causes and extrauterine causes: placental, decidual, fetal, microbic; renal, hepatic, intestinal, thyroidal, parathyroidal, mammary, reflex; the eclamptic type; the etiological significance of albuminuria gravidarum; albuminuria, the "C.D.Q." of symptomatology in eclampsia; other danger signals; the success-in-treatment arguments in etiology, their value and possible fallacies; conclusions.

2. Professor TEACHER: (1) Changes in the liver; a focal necrosis; thrombosis of capillaries; haemorrhages. (2) Changes in the kidneys; cloudy swelling and areas of necrosis and haemorrhage. (3) Changes in other organs. (4) Certain rare cases of eclampsia with suppression of urine due to symmetrical necrosis of the renal cortex.

(*b*) The Results of Treatment of the Inflammatory Diseases of the Uterine Appendages. To be opened by (1) Dr. W. S. A. GRIFFITH (on the Medical Aspects); (2) Mr. CHRISTOPHER MARTIN (on the Surgical Aspects), followed by Drs. Munro Kerr, Nigel Stark, and F. W. N. Haultain.

The following is an abstract of Dr. GRIFFITH'S paper:

A comparison is made between the medical treatment in vogue before the days of abdominal surgery and at the present time. Reference is made to the new lines of treatment which have followed a more exact knowledge of the etiology and pathology of inflammation in the direction of prevention and of treatment, and the conclusion is arrived at that a large proportion of cases can be successfully treated without operations of mutilation and a large number prevented by the proper application of the principles of disinfection to the seat of primary infection.

In the Pathological Museum a space has been allotted for the exhibition of specimens, microscopic slides, photographs, etc., relating to the Inflammatory Diseases of the Uterine Appendages, and also to Sarcoma of the Uterus. The Committee also invite other specimens of interest, notably those relating to Hydrocephalus, etc.

LARYNGOLOGY AND RHINOLOGY.

President: J. M. HUNT, M.B., Liverpool.

Vice-Presidents: JOHN BARK, F.R.C.S.E., Liverpool; C. E. BEAN, F.R.C.S.E., Plymouth; J. E. MCDOUGALL, M.B., Liverpool; W. PERMEWAN, M.D., F.R.C.S., Liverpool; R. H. WOODS, B.A., M.B., F.R.C.S.I., Dublin.

Honorary Secretaries: THOMAS GUTHRIE, M.A., M.B., F.R.C.S., 155, Rodney Street, Liverpool; G. SECCOMBE HETT, M.B., F.R.C.S., 8, Wimpole Street, London, W.

The following subjects have been selected for special discussion:

Wednesday, July 24th, 10 a.m.—Discussion: The Differential Diagnosis of Oesophageal Stenoses.

Thursday, July 25th, 10 a.m. (together with the Section of Otology).—Discussion: The Education of the Specialist in Laryngology and Otology.

Friday, July 26th, 10 a.m.—Discussion: The Treatment of Chronic Suppurative Disease of the Ethmoidal Sinuses. To be opened by Professor J. N. HAJEK of Vienna.

The following is an abstract of his paper:

For the sake of clearness the subject may be divided as follows: (I) Chronic suppuration combined with hyperplasia. (*a*) The principal feature is polypus formation. Treatment consists in removal of polypi and prevention of relapses. Best method is local cocaine anaesthesia; removal with snare, by avulsion, if possible; removal of base with Grünwald's, Hartmann's, or Hajek's curettes, or Luc's forceps. Causes of relapse: (1) Polypi originating in depths of meatus are overlooked. (2) Bony parts from which the polypi grow are diseased. (3) Polypi originate also from interior of ethmoidal cells. (4) The primary cause of the polypi in many cases is a neglected latent empyema. The treatment always depends upon the particular conditions present. It may include (1) resection of most of the middle turbinated body, (2) removal of the bony base of the polypus, (3) opening of ethmoidal cells and removal of their lining membrane. Cutting instruments only are used, chemical and electric cautery contraindicated. Treatment prolonged; several sittings always required. Quantity of polypi removed at one sitting depends on conditions present. Good view of operative field indispensable. Interval of time necessary between individual operative proceedings. All polypus cases can be cured in course of time if no cause forbids operative treatment. Lack's method, consisting of removal of all polypi at one sitting in chloroform narcosis, may sometimes be considered but not generally employed. Operation difficult in general narcosis; view less good than under cocaine anaesthesia; also, owing to necessity for completing operation at one sitting, it is performed in the absence of knowledge of precise conditions, which is dangerous; last, but not least, all diseased parts cannot be removed at one sitting. (*b*) The principal feature is suppuration. **1.** Ethmoiditis with free discharge. Treatment always dependent on diagnosis after exclusion of other empyemata and freeing of openings of ethmoidal cells. Removal of all polypi and hypertrophic parts of ethmoid generally preceded by resection of middle turbinated body. Precise determination of suppurating cells with probe; opening cells with hook and curette. Details depend on individual conditions in every case. Special care required in region of infundibular cells on account of neighbourhood of orbit and lamina cribrosa. When infundibular cells are placed high external operation is indicated. In opening posterior ethmoidal cells one may begin with anterior cells and gradually proceed backwards, or begin at once with posterior labyrinth. The latter is attacked above in section of middle turbinated body. A high septal deviation, if present, must be previously corrected. As much as possible may be done at each sitting, but only so long as a good view is possible. An interval between sittings is indispensable to allow reaction to subside. Packing after operation should be avoided. Healing is always by flat cicatrization, never by filling up of ethmoidal cells. External method indicated: (1) In cases with high infundibular cells inaccessible from nasal cavity. (2) In cases of very narrow nose with threatening symptoms. (3) In cases complicated by severe frontal sinusitis. (4) In cases in which perforation has occurred choice of operative method depends on nature of case. Slight relapses frequent even after radical operation. **2.** Treatment of closed ethmoiditis. Treatment generally consists in opening prominent portion of dilated ethmoidal cells to obtain free discharge. After opening a large part of bony walls must be removed. Details of treatment decided by findings after investigation with probe. No important difference exists between treatment of diseased single cells and greater part of labyrinth. External operation only necessary if process is complicated by perforation. (II) Treatment of chronic ethmoiditis accompanying ozaena. Operation contraindicated in cases with free discharge. Curettage only for very definite disease of single cells. Cases with threatening complications treated by external operation. (III) Treatment of secondary suppurative disease of the ethmoid (tuberculosis, syphilis, malignant growths) depends upon nature of primary disease.

Foreign and Colonial visitors are cordially invited to attend the meetings of the Section, and to take part in the discussions. Members are invited to contribute any preparations, specimens, or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects. The Committee ask particularly for pathological specimens, drawings, and radiograms illustrating diseases of the oesophagus, including foreign bodies, also for instruments for the diagnosis and treatment of such diseases.

MEDICAL SOCIOLOGY.

President: J. C. MCVAIL, M.D., LL.D., Glasgow.

Vice-Presidents: THOMAS BUSHBY, M.B., Liverpool; MICHAEL DEWAR, M.D., Edinburgh; HENRY HARVEY, M.B., Liverpool; R. W. HENRY, B.A., M.D., Leicester.

Honorary Secretaries: A. GORDON GULLAN, M.D. M.R.C.P., 37, Rodney Street, Liverpool; J. H. TAYLOR M.B., 299, Eccles New Road, Salford.

The following discussions have been arranged:

Wednesday, July 24th.—(1) A Public Medical Service under Professional Control. To be opened by Dr. R. R. RENTOUL, followed by Mr. H. A. Ballance, Professor B. Moore, and Drs. R. Wallace Henry, T. J. Verrall, Lauriston Shaw, F. Rees, and Lionel Picton. (2) *Short discussion, limited to one hour:* Reform of Hospital Out-patient Departments. To be opened by Dr. M. DEWAR, followed by Mr. W. Greenwood, and Drs. Parkinson and E. C. Hadley.

Thursday, July 25th.—(1) Administrative Measures Consequent upon the Compulsory Notification of Phthisis. To be opened by Dr. J. C. MCVAIL, followed by Drs. Niven, Hope, and Marcus Paterson. (2) *Short discussion, limited to one hour:* Administrative Provisions for the Prevention of Malingering. To be opened by Dr. A. G. GULLAN, followed by Drs. M. Dewar and E. Browne.

Friday, July 26th.—Payment of Medical Services by Capitation *versus* Payment per Attendance under the National Insurance Act. To be opened by Dr. H. HARVEY, followed by Drs. R. P. Cooper, C. G. S. Flemming, E. C. Hadley, A. Stewart, Hall, and J. E. O'Sullivan.

MEDICINE.

President: Professor T. R. GLYNN, M.D., F.R.C.P., Liverpool.

Vice-Presidents: T. R. BRADSHAW, M.D., F.R.C.P., Liverpool; Professor J. MICHELL CLARKE, M.A., M.D., F.R.C.P., Clifton, Bristol; S. H. HABERSHON, M.A., M.D., F.R.C.P., London, W.; J. LLOYD ROBERTS, B.A., B.Sc., M.D., Liverpool.

Honorary Secretaries: JOHN OWEN, M.D., 13, Rodney Street, Liverpool; THEODORE THOMPSON, M.D., F.R.C.P., 94, Portland Place, London, W.; W. H. MAXWELL TELLING, M.D., 29, Park Square, Leeds.

The following programme has been arranged:

Wednesday, July 24th.—Discussion on The Diagnosis and Treatment of Early Cardiac Complications of Rheumatism. To be opened by Dr. DAVID B. LEES (London). The following is an abstract of the opening paper:

(1) "Acute and subacute rheumatism" is a microbic infection, most common and most virulent in childhood, less frequent and usually less virulent in adolescents and young adults. (2) There is but one symptom which is present in every case of the disease. Arthritis, nodules, endocarditis, pericarditis, pleurisy, tonsillitis, erythema, chorea, and all other rheumatic symptoms may be present or absent, but *dilatation of the left ventricle is invariably present.* This dilatation is caused by toxaemia or myocarditis or both combined, and it is a very early symptom. (3) The dilatation can be easily detected by careful percussion rightly performed. It is quite easy to determine accurately the sloping line of dullness of the edge of the left ventricle in the fourth and fifth left interspaces, and that of the right auricle in the fourth right interspace. (4) The first essential for the successful treatment of the cardiac implication of rheumatism is prolonged rest. (5) The second essential is an adequate antirheumatic medication, the most useful form of this being a combination of sodium salicylate and sodium bicarbonate in the proportion of one part of the former to two of the latter, given in adequate and increasing doses. (6) During the treatment by salicylate it is necessary (*a*) to prevent constipation, (*b*) to keep the urine slightly alkaline, (*c*) to stop the medicine when vomiting or other symptom due to salicylate occurs, but to *resume it after a few hours in a dose one-half the size of the dose last given,* and soon to increase the amount as far as possible. (7) When the dilatation (with or without endocarditis) is great, and especially when pericarditis is present, the medicine should be freely given, and an ice-bag should be kept permanently over the precordial region, with due precautions against general chill. Careful nursing is essential. The application of leeches is sometimes beneficial.

Thursday, July 25th.—Discussion on The Pathogenesis, Diagnosis, and Medical Treatment of Gastric Ulcer. To be opened by Sir BERTRAND DAWSON (London).

The following is an abstract of the opening paper:

Throughout the discussion, the terms "mucous ulcer" and "chronic ulcer" will be employed. *Mucous ulcer* is used to denote an ulceration of the mucous membrane. It is usually a subacute condition, tending to heal quickly and completely. Sometimes, however, it progresses rapidly into perforating ulcer, or takes on the characteristics of a chronic lesion. *Chronic ulcer* is meant to denote a condition which involves most or all of the coats of the stomach, and can usually be appreciated by sight and touch without opening the stomach. *Duodenal ulcer* is included in the discussion. The duodenum above the common duct is embryologically, functionally, and pathologically closely related to the stomach, and the problem on the two sides of the pylorus is the same. *Mucous ulcers* are not only associated with the terminal stages of fatal diseases, like septicaemia and Bright's disease, but with curable gastric disorders. They are seen, not only in the *post-mortem* room, but on the operating table. They are produced by the combined effect of (1) Lowered vitality or damage of the mucous membrane; (2) acid juice. Damage may be by local bacterial infection, gastrotoxins, or mechanical injury. (1) Experimental evidence of the effects of bacterial infection, and gastrotoxins. Illustrations of mechanical injury, which may also be a factor in post-operative peptic ulcer. (2) Acid juice is a necessary factor. Ulcers are confined to the hydrochloric acid region of the alimentary canal. Experimental damage alone will not produce them, though in conjunction with acid juice it will. In the human being, the stomach in which mucous ulcers appear may be proved to be the seat of bacterial infection. The relative responsibility of each factor may vary in different cases. Chronic ulcers: Has chronic ulcer a separate origin, or is it developed from the mucous ulcer? Like the mucous ulcer, it exists where the hydrochloric acid juice exists. Its appearance suggests chronic irritation and efforts at repair. Pathological anatomy supports the development of the chronic from the mucous ulcer. The defensive forces of the gastric mucous membrane are considerable, and mucous ulcers heal rapidly. If and when the submucous coat is reached, this specially defensive mechanism disappears. If then the invading force is strong and its progress rapid, acute perforating ulcer occurs, whereas if it is less strong and its progress slow, chronic ulcer develops. That mucous ulcers are multiple, whereas chronic ulcer usually occurs singly; the existence of mucous ulcers over the whole of the stomach, whereas chronic ulcers are usually found in the region of the pylorus; the different age and sex incidence in the two conditions are facts which might be held to support the separate origin of chronic ulcer. The clinical picture of ulcer has altered. Whereas formerly the typical patient was most often a young woman who had pain after food relieved by vomiting, with or without haematemesis, now the patient is more often a man, is usually over 30, and food more often relieves pain than produces it. The change of view is due to surgery. *Contrast* between group of cases diagnosed as ulcer in pre-operative days and group of cases demonstrated as ulcer at operation. Former group presents not only different features, but less consistent features, in comparison with the latter. In the pre-operative group a case here and there came to autopsy for perforation or haemorrhage; the remaining cases recovered, and it was a natural inference that they consisted of ulcers which had healed under treatment. Pain, tenderness, vomiting, haematemesis characterize other conditions besides ulcer, and bleeding need not have a focal origin. *Analysis of causes in the pre-operative group:* Chronic ulcer, as now understood; gastritis, due to food or drink irritation, to intoxications, and to chronic infections, aided in many instances by impaired motility; disordered secretion, set up by distant irritation (in, say, appendix or colon), and associated or not with pyloro- or cardio-spasm. Mucous ulcers are no doubt sometimes present, but they give no special manifestations, and call for no different treatment. They are of interest for what they can lead to if the conditions with which they are associated are not treated. *Clinical pictures illustrating foregoing:* (1) The dyspepsia of the anaemic young woman; (2) gastric symptoms and trouble in the colon; (3) gastric symptoms and the appendix; (4) gastric symptoms and morbid condition of mouth, nose, and pharynx. *The clinical picture of chronic ulcer:* (Developed structural stenosis of the

pylorus is excluded because it gives evidences of its own, and presents no difficulty); objective findings and their value; tenderness, cutaneous hyperaesthesia; size and position of stomach; test supper and breakfast disclosing acid content and motility; bacteriological examination; *X* ray examination. Haematemesis and melaena need separate consideration because they may occur alone as well as in conjunction with above symptoms. If in conjunction, they make the ulcer picture clearer. Significance of bleeding as an isolated phenomenon in earlier and later life. Occult blood. *Diagnosis:* Systemic disease may wear the guise of stomach disorder, but seldom presents difficulty to the experienced clinician. The conditions that do present difficulty are: (1) Malignant disease of the stomach; (2) infective or toxic gastritis associated with disease of gums, tonsils, pharynx, and nose; (3) gastric disturbance caused by disease of gall-bladder, appendix and colon; (4) hyperchlorhydria of unknown origin. *Treatment:* Treatment, including the indications for gastro-enterostomy.

Friday, July 26th.—Papers.

Buckley, Dr. Charles W. Painful Affections of the Shoulder.
Brooks, Dr. Francis. Cause and Treatment of Certain Cases of Neurasthenia.
Ewart, Dr. William. Demonstration of a More Systematic Posterior Apical Percussion; and of the "Normal Interspinous Dullness" as an Aid to Diagnosis.
Cammidge, Dr. P. J. The Quantitative Regulation of the Diet in Diabetes.
Gibbard, Major T. W., R.A.M.C., and Harrison, Major L. W., R.A.M.C. The Treatment of Syphilis with Salvarsan and Neo-Salvarsan.
Gordon, Dr. W. Further Experience of the Cardiac Sign in Cancer.
Muthu, Dr. C. Some Recent Cases of Pulmonary Tuberculosis Treated by Continuous Antiseptic Inhalation.
Parsons, Dr. C. D. Tuberculin in the Diagnosis and Treatment of Tuberculous Diseases, especially Pulmonary Tuberculosis.
Pearson, Dr. S. Vere. Some Further Experience of Artificial Pneumothorax in the Treatment of Pulmonary Tuberculosis.
Walters, Dr. F. R. The Estimation of General Improvement in Pulmonary Tuberculosis.

NAVY, ARMY, AND AMBULANCE.

President: Colonel Damer Harrisson, K.H.S., M.Ch., F.R.C.S.E., Liverpool.

Vice-Presidents: Colonel Guy Carleton Jones, M.D., Director-General of Medical Services Militia of Canada, Department of Militia and Defence, Militia Head Quarters, Ottawa; Surgeon-General W. Babtie, V.C., C.M.G., M.B., L.R.C.P., Deputy Director-General, Army Medical Service, War Office, S.W.; Lieutenant-Colonel N. E. Roberts, M.B., D.P.H., Liverpool; Fleet Surgeon G. T. Collingwood, M.V.O., R.N., Royal Naval College, Osborne, Isle of Wight.

Honorary Secretaries: Captain J. H. P. Graham, M.R.C.S., L.R.C.P., 20, Fenwick Street, Liverpool; Lieutenant-Colonel Nathan Raw, M.D., F.R.S.E., 66, Rodney Street, Liverpool.

The following preliminary programme has been arranged:

Wednesday, July 24th.—Factors affecting the Marching Powers of Troops. To be opened by Captain Dunbar-Walker, R.A.M.C.

Thursday, July 25th.—Eyestrain: its Relation to Gunnery. To be opened by Fleet Surgeon Whitelegge R.N.

Papers:

Wildey, Fleet Surgeon A. G., R.N.: A Suggestion for the More General Use of Iodine in First Aid Treatment of Accidental Wounds.
Jones, Colonel Guy Carleton: The Importance of Medical Tactics.

NEUROLOGY AND PSYCHOLOGICAL MEDICINE.

President: L. R. Oswald, M.B., Glasgow Royal Asylum, Gartnavel, Glasgow.

Vice-Presidents: W. Alexander, M.D., F.R.C.S. Liverpool; F. E. Batten, M.D., F.R.C.P., London, W.; David Blair, M.D., County Asylum, Lancaster; E. S. Reynolds, M.D., F.R.C.P., Manchester.

Honorary Secretaries: W. B. Warrington, M.D., F.R.C.P., 63, Rodney Street, Liverpool; H. Devine, M.D., West Riding Asylum, Wakefield; Purves Stewart, M.A., M.D., F.R.C.P., 94, Harley Street, London, W.

The following programme has been arranged:

Wednesday, July 24th.—Discussion on The Neuroses and Psychoses of the Climacteric: their Prognosis and Treatment. To be opened by Dr. R. Percy Smith (Psychiatry), Dr. C. J. Macalister (General Medicine), and Dr. T. B. Grimsdale (Gynaecology), followed by the President, Dr. Nathan Raw, and others.

The following is a synopsis of Dr. Smith's paper:

The statistics of the Lunacy Commissioners for England and Wales in the sixty-fifth annual report show the climacteric as a cause or associated factor in 8.2 per cent. of all cases admitted to asylums in England and Wales in the years 1907, 1908, and 1909. Mental disorder at the climacteric exists in a larger proportion in the private than in the pauper class, as 11.2 per cent. to 7.8 per cent. In the private class the percentage of climacteric cases is greater than that of senile cases; the opposite prevails in the pauper class. Possibly greater opportunities for introspection and want of occupation account for this greater preponderance in the private class. The percentage of admissions of married women and widows is greater than that of single women; but relatively to the proportion of married and single in the general population there is a greater liability to single women to break down at the climacteric. The age at which climacteric insanity occurs may be from 39 to 59 in the writer's experience, the average age having been 48.9. Heredity of insanity or neuroses has been found in 58 per cent. In 34.7 per cent. of cases at Bethlem Hospital, and 33 per cent. in private practice, there had been previous attacks of insanity. Manic-depressive insanity may recur or begin at the climacteric. Prodromata may be neurotic or definitely mental, or drug habits may arise. Mental disorder at the climacteric is predominantly of the depressive or melancholic type, especially in not first attack cases. In first attacks there is a considerable proportion of cases of delusional insanity, especially of the sexual type. Instances given of various forms of insanity. Maniacal and confusional states are much less common. Primary dementia or general paralysis occur in a few cases. Summary given of cases where operations had led to early menopause, or had been done about the time of impending climacteric. *Prognosis:* Depends largely on the nature of the case. Recovery more likely to occur in patients who have previously suffered from insanity than in first attack cases at the climacteric. Hypochondriacal or agitated melancholia very unfavourable. Delusional insanity ends in chronicity. Insanity occurring at the climacteric after operations very unfavourable. Pre-existing chronic insanity not often ameliorated at the climacteric. *Treatment:* Similar to that adopted for psychoses occurring from other causes. Asylum care usually needed. Administration of ovarian extract does not fulfil expectations. Questions as to the value of transplantation of ovarian tissue and of psycho-analysis.

The following are the headings of Dr. Grimsdale's opening remarks:

Meaning of climacteric. Functions of the ovaries. Effects of removal of ovaries. Grounds for believing in internal secretion. All ductless glands closely connected with sex and with each other. At climacteric one of this group ceases to act and the balance between these glands is upset. The nature of the ovarian secretion unknown. Climacteric symptoms very similar to those of hyperthyroidism. An account of the neuroses usually seen at the climacteric by the gynaecologist.

Paper:

Rentoul, Dr. R. R. The Prevention of Mental Degeneracy.

Thursday, July 25th.—Discussion on Diagnosis and Treatment of Compression Paraplegia. To be opened by Dr. Ernest Reynolds and Sir Victor Horsley, followed by Drs. Risien Russell, Hinds Howell, Grainger Stewart, Grant McAfee, W. B. Warrington, and Messrs. Donald Armour and K. W. Monsarrat.

The following is a synopsis of Dr. Reynolds's remarks:

Definition of compression paraplegia. Causes:—Outside vertebrae: tumours, aneurysm. In vertebrae: trauma, caries, tumours. In membranes: haemorrhage, inflammations (especially cervical pachymeningitis) tubercle, syphilis, tumours, parasites. In cord: tumours. Symptoms: Sensory, motor (including ataxia), trophic, condition

of reflexes. Variation of symptoms due to position of compression and to cause of compression. Differential diagnosis. Diagnosis of cause and diagnosis of site of compression (including affections of cauda equina). Diagnosis from other diseases, such as spastic diplegia from double cerebral lesions (that is, Little's disease). Amyotrophic lateral sclerosis, progressive muscular atrophy, disseminated sclerosis, hysteria (including traumatic hysteria), syphilis of cord, transverse and other forms of myelitis, syringomyelia, haemorrhage in cord. Treatment of compression myelitis. Apart from syphilis and certain cases of tubercle, treatment is generally surgical.

Papers (to be read if time permits):

MCDOWALL, Dr. Colin. The Nuclei of the Neutrophile Cell in Acute Insanity.
CLARKE, Dr. Michell. Case of Tumour of the Corpus Callosum (with specimens).

Friday, July 26th.—Papers:

ALEXANDER, Dr. William. On the Nature and Treatment of Epilepsy.
SMITH, Dr. William Maule. On the use of Extract of Brain Tissue in the Treatment of various forms of Insanity.
MACKENZIE, Dr. Ivy, and MARSHALL, Dr. R. M. A Clinical and Pathological Study of some Cases of Dementia Praecox.
NABARRO, Dr. David. The Results of the Wassermann Reaction in 150 Cases of Mental Disease.
CRICHTON-MILLER, Dr. Re-education of the Attentive Control.
RENTOUL, Dr. R. R. The Prevention of Mental Degeneracy (if not taken on Wednesday).
SUCKLING, Dr. C. W. Insanity cured by Nephropexy.

Foreign and Colonial visitors are cordially invited to attend the meetings of the Section, and should they desire to read papers they are requested to send in their names as soon as possible to one of the Honorary Secretaries, giving the titles of their papers for approval by the Committee of Reference.

Members are invited to contribute any preparations, specimens or drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

Dr. William Alexander extends a cordial invitation to members of the Section to visit the Maghull Colony for Epileptics. Those desirous of making the visit are requested to communicated with Dr. Alexander, 31, Rodney Street, Liverpool.

OPHTHALMOLOGY.

President: EDGAR ATHELSTANE BROWNE, M.Ch., F.R.C.S. Eng., Liverpool.

Vice-Presidents: CHARLES GEORGE LEE, M.R.C.S., Liverpool; ALEXANDER OGILVY, F.R.C.S.Ire., Clifton, Bristol; ANDREW MAITLAND RAMSAY, M.D., F.F.P.S., Glasgow; CHARLES HARTLEY BEDWELL SHEARS, M.R.C.S., Liverpool.

Honorary Secretaries: ARTHUR NIMMO WALKER, B.A., M.D., 45, Rodney Street, Liverpool; ROBERT JESSOP HAMILTON, F.R.C.S.Eng., 82, Rodney Street, Liverpool; CLAUDE ALLEY WORTH, F.R.C.S., 138, Harley Street, London, W.

The following subjects have been selected for discussion:

Wednesday, July 24th.—Irido-cyclitis (special reference to pathology). Mr. G. COATS; Mr. A. W. ORMOND.

The following is a synopsis of Mr. COATS's paper:

The part played by the intestinal canal in the causation of chronic irido-cyclitis will be discussed. A fallacy to be guarded against lies in the great prevalence of constipation and intestinal putrefaction, which would make their association with irido-cyclitis in a certain number of cases not surprising, even though in fact no connexion between the two existed. Cases in which no evidence of any intestinal abnormality or other probable source of infection is discoverable undoubtedly occur. The views of Elschnig, de Schweinitz, and v. Hippel on auto-intoxication will be summarized, and the value of the indican reaction as a test of intestinal putrefaction will be reviewed. The very chronic form of irido-cyclitis which is associated with heterochromia and cataract will be mentioned. Fuchs believes that in these cases some unknown cause first hinders the normal acquisition of pigment in the eye, and then, in later life, gives rise to the irido-cyclitis. The opinion of members will be sought as to whether it is not more probable that the cyclitis is the primary disease, the heterochromia being a secondary phenomenon due to a gradual bleaching of the iris in consequence of the inflammation. It is probably agreed that the cataract is secondary. Some points in connexion with the pathology of sympathetic ophthalmitis will be raised. Price Jones and Browning have stated that the large mononuclear cells of the blood are increased in this disease, and that this may point to its being due to a protozoal infection. The incubation period also is not unlike that of the protozoal disease, syphilis, and the occasional faculty which the noxa of sympathetic irido-cyclitis possesses of remaining latent over a prolonged period and then breaking out into activity, suggests an analogy with the similar latency and recrudescence of the *Spirochaeta pallida* in the tertiary stages of syphilis. On these grounds the administration of salvarsan has been suggested. The experience of members on this method of treatment will be asked, and three cases in which it was carried out will be referred to. The views of Elschnig on the relation of anaphylaxis to sympathetic irido-cyclitis will be submitted to a brief examination. Discussion will be invited on the question how far the histological changes which are usually regarded as characteristic of sympathetic irido-cyclitis are, in fact, diagnostic of that affection, whether they occur only in this disease and in all cases of it. Two examples of a very mild type of sympathetic irido-cyclitis will be quoted, not cases in which, after a threatening onset, the final result was good, but in which from first to last the symptoms in the second eye were trifling. Reports of similar cases would be welcomed.

Thursday, July 25th.—Tuberculin and Serum Therapy. Mr. GEORGE MACKAY; Dr. HILL GRIFFITH; Mr. PEEL RITCHIE.

Friday, July 26th.—Salvarsan. Mr. S. STEPHENSON; Dr. MAITLAND RAMSAY, and Mr. S. H. BROWNING.

The following papers have been accepted:

GROSSMANN, Dr. Board of Trade Standard of Vision.
HINSHELWOOD, Dr. Word Blindness.
POLLACK, Dr. Intra-ocular Haemorrhage.
BRADBURN, Dr. Ocular In-balance and Auditory Affections.

Foreign and Colonial visitors are cordially invited to attend the meetings of the Section.

Members are invited to contribute any cases, preparations, specimens of drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

OTOLOGY.

President: H. E. JONES, M.R.C.S., Liverpool.

Vice-Presidents: A. H. CHEATLE, F.R.C.S., London, W.; J. K. LOVE, M.D., Glasgow; P. M. YEARSLEY, F.R.C.S., London, W.; HENRY HANNA, M.A., M.B., Belfast.

Honorary Secretaries: E. M. STOCKDALE, M.R.C.S., 67, Rodney Street, Liverpool; W. M. MOLLISON, M.A., M.C., F.R.C.S., Warden's House, Guy's Hospital, London, S.E.; D. L. SEWELL, M.B., B.S., 2, Peter's Square, Manchester.

The following subjects have been selected for special discussion:

Wednesday, July 24th, 10 a.m. — Discussion: Acute Middle-ear Suppuration, its Neglect and Proper Treatment. To be opened by Mr. R. H. WOODS (Dublin); followed by Professor Gustav Alexander (Vienna) and Dr. Claude Rundle (Medical Superintendent, City Hospital, Fazerkelly).

It is hoped that medical officers of fever hospitals and schools will attend this discussion, which is of special interest to them. The following are abstracts of the opening papers:

Mr. R. H. WOODS: Otitis media. Definition. Not an abscess, but inflammation of a mucous tract. Predisposing causes. Pathological conditions in throat and nose. Determining causes. Mechanical ones, particularly nasal douche. Degrees of severity due to microbe and patient. Clinical course in all essentially the same. Physical conditions during progress. Accompanying symptoms. Character of fluid at first and subsequently. Acute and

chronic cases. Fundamental difference between them a bacterial one. Keynote of treatment of acute cases is cleanliness. Neglect of acute otitis still great, even in the case of specific fevers. Summary of results obtained by investigating over 300 cases of measles and scarlatina in the Hardwicke Hospital in 1896. Method of treatment of ears in fevers. Treatment of acute otitis. Myringotomy. Course to be followed when symptoms are unrelieved by that procedure. Cerebral irritation in children. Need for better education of clinical physicians and medical students.

Professor Alexander: (*a*) Etiology and anatomy of acute otitis media suppurativa. (*b*) What are its main symptoms and otoscopic appearances? (*c*) What are its otoscopical findings and the results of hearing tests? (*d*) On what points can dependence be placed for early differential diagnosis? (*e*) What is its typical course? (*f*) In what cases are complete and incomplete recoveries likely to follow? (*g*) What cases tend to become chronic? (*h*) In what cases are intra-aural, extra-cranial, and endocranial complications respectively to be anticipated? (*i*) What are the risks of its neglect? (*j*) What are the principal aims in treatment? The reasons for avoiding too prolonged and too irritating methods of treatment. (*k*) What are the chief points of importance in treatment? (*l*) The alleviation of pain, and the question of early paracentesis. (*m*) What is the best method of drainage? (*n*) Should antiseptics be used? (*o*) In what circumstances should irrigation be used? (*p*) In what circumstances are antiseptic powders to be recommended? (*q*) The use of antiseptic gauze. (*r*) What steps may be taken for improving the hearing, and at what stage may they be commenced? (*s*) What should be the treatment after suppuration has ceased? (*t*) The need of treating the naso-pharynx after otitis media. (*u*) Prophylaxis of the disease. (*v*) What are its characteristics in infants?

Dr. Claude Rundle: Percentage incidence in cases of scarlet fever, measles, and diphtheria. Frequency of spontaneous cure. Can otitis be prevented by the removal of post-nasal obstruction during the acute stage of the exanthemata? Intratympanic medication by either route of little value. Removal of tonsils or adenoids an unsafe procedure during the course of acute suppurative otitis media complicating the fevers. Paracentesis not often necessary. Mastoid abscess not a common complication of this condition. Antrotomy occasionally required. Radical mastoid operation probably never justifiable in uncomplicated cases of acute suppurative otitis media. Serum and vaccine therapy.

Thursday, July 25th, 10 a.m.—Joint Discussion with the Section of Laryngology on the Education of the Specialist in Laryngology and Otology. To be opened by Dr. P. Watson-Williams.

Foreign and Colonial visitors are cordially invited to attend the meetings of the Section, and should they desire to read papers they are requested to send in their names as soon as possible to the Liverpool Honorary Secretary, giving the titles of their papers for approval by the Committee of Reference.

Members are invited to contribute any preparations, specimens of drawings, or any instruments or apparatus pertaining to the work of the Section, which have been designed by themselves, in order that the Committee of the Section may make arrangements to form a special exhibit of such objects.

PATHOLOGY.

President: Professor Walker Hall, M.D., The University, Bristol.

Vice-Presidents: A. E. Boycott, M.A., B.Sc., M.D., London; Professor George Dean, M.B., The University, Aberdeen; Professor E. E. Glynn, M.A., M.D., Liverpool; T. S. Pigg Strangeways, M.A., L.R.C.P., Cambridge.

Honorary Secretaries: D. M. Alexander, M.D., School of Hygiene, The University, Liverpool; Pantland Hick, M.D., 21, Rodney Street, Liverpool; J. S. C. Douglas, M.B., Department of Pathology, University, Birmingham.

The following provisional programme has been arranged:

Wednesday, July 24th.—Discussion on Bright's Disease. Professor J. Lorrain Smith, F.R.S., will open the discussion with a paper on the morbid anatomy and etiology. Sir Clifford Allbutt will deal with the cardiovascular changes; followed by Professor J. Sims Woodhead, Dr. W. Russell, and Dr. J. F. Gaskell. Dr. F. Craven Moore will read a paper on the Liver and Metabolic Changes.

Thursday, July 25th.—Joint discussion with the Gynaecological and Obstetrical Section on Eclampsia. To be opened by Dr. J. W. Ballantyne in a paper on the etiology of the disease; followed by Dr. J. H. Teacher, on the morbid anatomy; and by Sir William Smyly, on the clinical application of recent research to treatment.

Friday, July 26th.—The following papers on pathological subjects will be read:

Horder, Dr. T. J. The Investigation of Puncture Fluids as an Aid to Diagnosis and Treatment.
Bolton, Dr. C. The Causation of Gastric Ulcer.
MacClean, Dr. H. Some Fallacies in the Routine Testing of Urines.
Barnes, Dr. A. G. Chemical Examination of Faeces in Actual Practice.
Williams, Dr. O. T. Excretory Functions of the Intestines and their Relations to Disease.
Glynn, Associate Professor E. Blood Cultures in Disease.

PHARMACOLOGY AND THERAPEUTICS.

President: Professor W. E. Dixon, M.A., M.D., Cambridge.

Vice-Presidents: Professor J. H. Abram, M.D., Liverpool: Professor R. J. M. Buchanan, M.D., Liverpool; Professor H. J. Campbell, M.D., Bradford; H. J. Roberts, M.D., Pen-y-groes, N. Wales.

Honorary Secretaries: O. T. Williams, M.D., 51a, Rodney Street, Liverpool; Assistant Professor F. J. Charteris, M.B., 400, Great Western Road, Glasgow; Professor J. Dundon, M.D., F.R.C.S., 3, Camden Place, Cork.

The following is the provisional programme:

Wednesday, July 24th.—Papers:

Marshall, Professor C. R. Clinical Experiences with Tetrahydropapaveroline Hydrochloride.
Charteris, Professor F. J. A Comparison of the Value of Arsenious Acid and of Salvarsan in Blood and other Non-syphilitic Diseases.
Dixon, Professor W. E., and Ransom, Dr. F. Bronchodilatation and its Significance in Asthma.
Macalister, Dr. C. J. A Contribution to the Study of Symphytum Officinale.
Saubermann, Dr. (Berlin). The Internal Administration of Radium Emanations.
Goulston, Dr. A. Dextrose in the Treatment of Certain Forms of Heart Disease.
Williams, Dr. O. T. Cod-liver Oil.

Thursday, July 25th.—Discussion on The Treatment of Heart Muscle Affections (apart from Valvular Disease). To be opened by Professor G. A. Gibson and Professor Cushny, followed by Drs. John Hay and A. J. Clarke.

Friday, July 26th.—Discussion on The Rôle of Calcium Salts as Therapeutic Agents. To be opened by Professor Benjamin Moore and Sir James Barr, followed by Professor Gowland Hopkins and R. B. Wild and Drs. A. P. Luff, H. H. Dale, F. Ransom, and G. R. Mines.

The following is an abstract of the opening paper:

Professor Benjamin Moore: The action of calcium may for convenience be considered under two distinct headings, namely, as an active physiological agent acting catalytically or otherwise in the reactions of the cell, and secondly, as a precipitant, either of organic or inorganic substances. As was originally suggested by Ringer in comparing muscular contraction with coagulation and rigor, these two functions are probably closely inter-related, and both are possibly connected with the balance of oxidation processes. According to varying degrees of oxidation, soluble or insoluble calcium salts may be formed, with an accompanying to-and-fro variation of cyclical activity and inactivity, such as is seen in the beating heart. Some light may accordingly be thrown on the problem by considering first the physiological and pathological conditions of calcium salt deposition. There is a close correspondence between the deposition under physiological conditions and that which occurs under many pathological circumstances. In both cases deposition commences in extravascular areas fed only by lymph infiltration when an extravascular region has grown to a certain size and been so excluded from oxygen supply. The deposition is often accompanied by simultaneous deposit of very much reduced bodies, such as cholesterin and the saturated fatty acids, oxalates,

and uric acid. In normal bone formation, an entirely extravascular tissue, namely, cartilage, is first formed, and when this reaches a certain volume, calcium phosphate commences to deposit, then at the irruption stage blood vessels commence to grow in, or caseation and breakdown would occur; but even in the subsequent growth, the calcium phosphate of the Haversian systems is deposited in the lymphatic and extravascular areas around the blood vessels, and it is in old age when oxidation processes are still more reduced that more and more tricalcic phosphate is formed, till the bones become hard and brittle. In pathological conditions the same factors are at work. It is in the centre of caseating masses of tubercle away from blood supply and oxidation that calcification occurs. Again, in aged arteries, or where the vessels of the artery wall have broken down, and blood supply and oxidation have been interfered with, calcification and calcareous plaques begin to appear. It is for this reason also that calcium is the predominant kat-ion in the incompletely oxidized bodies which appear in gout and in renal calculi, such as calcium urate, calcium oxalate, and calcium phosphate. The two factors are the insolubility of these salts of calcium and slow circulation and diminished oxidation. Where there is a slow peripheral circulation and a low capillary pressure leading to a slow and inefficient lymph filtration, then these various calcium deposits tend to form. The part played by calcium salts in the coagulation of blood and of milk is also connected with the formation of insoluble bodies with peculiar properties, although details differ in the two processes. Here the coagulating protein acts as an anion, and in both cases calcium is present in the clot, but in fibrin coagulation the calcium also acts as an activator or co-enzyme to the thrombase. In the activating power of calcium in active processes, such as muscular contraction, there may be a potential coagulation which is reversible and does not proceed beyond a certain stage, merely modifying temporarily the colloidal aggregation and then being balanced and reversed by the automatic cut off in the oxidation, so that an action which might be mechanically compared to the escapement wheel of a clock or watch is produced.

PHYSIOLOGY.

President: Professor J. SMYTH MACDONALD, B.A., L.R.C.P., Sheffield.

Vice-Presidents: Professor A. B. MACALLUM, F.R.S., Toronto; Professor BENJAMIN MOORE, D.Sc., M.R.C.S., Birkenhead; H. M. VERNON, M.D., Oxford; Professor G. N. STEWART, M.D., Cleveland, U.S.A.

Honorary Secretaries: J. A. MILROY, M.A., M.D., Queen's College, Belfast; T. G. BROWN, B.Sc., M.B., The University, Liverpool; F. P. WILSON, M.Sc., M.D., 1A, Rodney Street, Liverpool.

The following provisional programme has been arranged:

Wednesday, July 24th.—Discussion on the Bio-physics and Bio-chemistry of the Neurone, to be opened by Dr. F. W. MOTT, F.R.S., followed by Professor C. S. Sherrington, Professor J. S. Macdonald, Dr. Wakelin Barratt, and Professor A. B. Macallum.

The following is an abstract of the opening paper:

Introduction. The specific energy and durability of the neurone. The present position of the neurone concept. The inferences regarding the structure and functions of the nervous system derived solely from a study of the dead neurone in fixed and stained tissues may be misleading unless correlated with bio-chemical and bio-physical investigation of the living neurone. Experiments and observations relating to vital phenomena of the neurone: (*a*) in the living state; (*b*) after fixation and subsequent staining of nervous tissues. (*a*) Neuronic amoeboidism. Professor Harrison's experiments and observations. Nageotte and Marinesco's observations. The examination of living nerve cells by the aid of the ultra-microscope. The changes in luminosity in relation to changes in the colloidal state of the cell. Effects of altered physical and chemical conditions. The absence of neuro-fibrils and Nissl-bodies in the living cell. The neurobion hypothesis of Cajal. Evidence in support thereof by (*a*) examination of the living cell; (*b*) examination of degenerating and regenerating neurones stained by Silver fibril method. The reaction of the neurone after section of the neuraxon as observed after section of nerves—(1) in the central end of the cut nerve; (2) in the very early neo-formative reaction in the neuraxons, separated by two sections of a nerve from the trophic centre and peripheral end (Perroncito); the variation of intensity of neo-formative reaction of the non-myelinated and myelinated nerves (Cajal), also of sensory myelinated and motor myelinated nerves (Marinesco); (3) the alterations in the appearance and thickness of the neuro-fibrils in nerve cells in disease, and induced by experimental variation of temperature to which the animal has been exposed (Cajal). The neurobions form by reciprocal attraction the conductile elements of the neurone. The importance of the laws relating to osmotic pressure, surface tension, and movement of ions in any explanation of the vital phenomena of the cells of the body generally and of the neurone in particular. Application of the physiology of the neurone to pathology. The effect of the neurone of cerebral anaemia—hyperpyrexia, trauma, and shock. Necrobiosis of the neuron in amaurotic idiocy of Jewish children, showing specific bio-physical and bio-chemical changes, due either to an undiscovered toxic condition of the ambient medium, or more probably inborn failure of specific durability owing to a germinal deficiency.

Thursday, July 25th.—Discussion on the Importance of Substances Present in Minute Amount in Food, to be opened by Professor BENJAMIN MOORE, M.A., D.Sc., F.R.S.

The following is an abstract of the opening paper:

It is only in recent times that we have gradually come to realize that there are constituents present in foods often in minute amounts, of which the value cannot be estimated by the heat energy that they contain and can yield on oxidation to the body. This was first shown for the inorganic salts, which were at one time regarded as inert constituents, or even as protein impurities, but are now known to be important activators to the functions of the organic constituents without which these become inert. In the hormones, or internal secretions, organic substances are found, which in minute amounts stimulate and activate in a very specific way definite tissues, and cause changes in nutrition out of all proportion to their mass. The stimulating action of certain extractives from muscle and from yeast form another example, and it would appear to be a general rule especially seen in man that some form of stimulus is almost essential, and that, if abstinence or restriction is practised in one form, some other form must be substituted. The various cereal foods which appear so simple in nature also contain basic bodies in minute quantities which exert a powerful stimulant action upon the nervous tissues, and in their complete withdrawal certain well-marked results appear which are intimately connected with diseases of nutrition. These substances appear to be formed in the peripheral layers, and are removed in certain methods of preparing the cereals, similar bodies are also contained in yeast and legumes, and are probably widely distributed in all the germinative products of plants. The relationship of such bodies to such diseases as beri-beri, and diseases of nutrition in infants and growing animals, is most interesting, and is opening a vast new territory of research.

Discussion on Tissue Respiration, to be opened by Dr. H. E. ROAF, M.D., D.Sc., followed by Dr. H. M. Vernon.

The following is an abstract of the opening paper:

Separation of the problems involved in tissue or fundamental respiration from those of external respiration. The gaseous exchange of the tissues and its relation to the total energy transformations; nature of substances oxidized. Respiratory quotient. Oxygen intake; difference between oxygen tension and total amount of oxygen consumed. Energy transformations under anaërobic conditions. Carbon dioxide output less urgent than oxygen intake. All active processes require an increased oxygen intake, and are followed by an increased carbon dioxide output; certain processes that do not involve energy transformations do not require increased gaseous exchange (kidney filtration and decerebrate rigidity). Intermediate steps not known; various possible intermediate products.

In continuing the discussion Dr. H. M. VERNON will deal principally with the process of oxidation and enzymes.

Friday, July 26th.—Papers:

Sherrington, C. S. Some Causes of Uncertainty in Reflex Reactions.
Vernon, H. M. (1) The Function of Lipoids in Vital Processes. (2) The Bio-chemistry of Respiration.
Milroy, J. A. A Rapid Method for the Estimation of Urea (with demonstration).
Milroy, T. H. Observations in the Production of Apnoea.
Anderson, R. J. Comparative Effects of Training on Animal Activities.
Brown, T. Graham. Remarks on the Mechanics of Progression.

As the programme of the Section is now nearly completed, the Secretaries request that any member desirous of reading a paper will submit it without delay.

STATE MEDICINE AND INDUSTRIAL DISEASES.

President: A. K. Chalmers, M.D., Glasgow.

Vice-Presidents: A. G. R. Cameron, M.B., B.S., D.P.H., Worthing; E. Wm. Hope, D.Sc., M.D., Liverpool; S. Marsden, M.B., D.P.H., D.Sc., M.R.I.A., F.R.S.E., Birkenhead; A. A. Mussen, B.A., M.D., D.P.H., Liverpool; M. J. Oliver, M.B., D.P.H., Roxburghshire.

Honorary Secretaries: T. W. N. Barlow, M.R.C.S., D.P.H., Public Health Office, Wallasey, Cheshire; J. J. Buchan, M.D., D.P.H., Holly Mount, Laurel Road, St. Helens; H. L. Heath, L.M.S.S.A., D.P.H., 65, Fonnereau Road, Ipswich.

The following is the provisional programme:

Wednesday, July 24th.—Discussion on Tuberculosis, in which Drs. Niven (M.O.H. Manchester), Marcus Paterson (Medical Director, Welsh Tuberculosis Fund), Wynne (M.O.H. Wigan), Meredith Young (County M.O.H. Cheshire), G. F. Buchan (M.O.H. Willesden), S. J. C. Holden (Assistant M.O.H. St. Helens), and others will take part.

Thursday, July 25th.—Papers:

Wheatley, Dr. J. H. Children and Dental Disease.
Phillips, Dr. C. H. Isolation in Scarlet Fever.
Bradburne, Dr. A. A. Visual Defects in Children.
Mackintosh, Dr. The Effect of Intramigration on National Health.

Friday, July 26th.—Joint debate on the Rôle of the *Bacillus coli* in Water Supplies. (For details see Section of Bacteriology.)

SURGERY.

President: Professor Rushton Parker, M.B., B.S., F.R.C.S., Liverpool.

Vice-Presidents: H. A. Ballance. M.S., F.R.C.S., Norwich; R. A. Bickersteth, M.A., M.B., F.R.C.S., Liverpool; F. C. Larkin, F.R.C.S., Liverpool; Albert Lucas, F.R.C.S., Birmingham; H. J. Stiles, M.B., F.R.C.S.E., Edinburgh.

Honorary Secretaries: R. W. Murray, F.R.C.S., 15, Rodney Street, Liverpool; G. P. Newbolt, M.B., B.S., F.R.C.S., 5, Gambier Terrace, Liverpool; A. W. Nuthall, Ch.M., F.R.C.S., 3, Calthorpe Road, Edgbaston, Birmingham.

The following subjects have been selected for discussion:

1. The Treatment of Carcinoma of the Rectum, to be opened by Mr. Harrison Cripps, London, followed by Messrs. C. A. Morton, G. Heaton, Sinclair White, W. S. Handley, Lockhart Mummery, Swinford Edwards, Rutherford Morison, W. I. de C. Wheeler, A. Lucas, C. P. Childe, E. Deanesly, L. H. McGavin, J. Blaxland, C. A. Leedham-Green, H. J. Paterson, J. W. Smith, Douglas Drew, David Newman, C. Gordon Watson, A. Don, Peter Daniel, J. Crawford Renton, C. Ryall, J. Howell Evans.

The following is a synopsis of the opening paper: (1) A brief reference to the pathology and histology of rectal growths, attention being called to the relationship of cancer to the innocent polypoid growths. (2) The method of its extension will be considered, with some criticism of recent views as to its early extension along the lymphatics running parallel with the bowel, and the influence these views may have on operative treatment. (3) A reference to the diagnosis of rectal cancer. (4) The selection of cases which in the author's view are suitable for operative treatment. (5) The operative treatment will be considered: palliative, by colotomy; operative, by excision. (6) The two methods of operation will be discussed. The operation by the perineal and sacral route, and the operation by abdominal section. (7) The prevention of stricture after sacral operations. (8) The prognosis as regards recurrence after excision. (9) A table will be put in of a series of cases, and an analysis of this series will be given in other tables having reference to the following points: The age of patients; the proportion in which operative treatment seemed possible; the number treated by excision; the number treated by colotomy; the length of life after colotomy; the number of cases of recurrence, with date of recurrence: the mortality of operation; the cases alive after taking the three years limit without recurrence; the subsequent history of the cases after three years.

2. The Diagnosis and Treatment of Tuberculous Disease of the Urinary Tract. To be opened by Mr. Hurry Fenwick, London, followed by Messrs. D. Newman, W. Bruce Clarke, P. J. Freyer, A. Fullerton, C. A. Leedham-Green, Swinford Edwards, J. Howell Evans, E. Deanesly, Sinclair White, Peter Daniel, A. Young, Hugh Lett, B. J. Ward.

The following is an abstract of the opening paper:

(*a*) Some method is needed to detect latent "closed" renal tubercle; perhaps the Debre and Paraf method (a species of the Wassermann reaction group) will supply this want. (*b*) Sex is a powerful factor in the evolution and progress of the disease, and by a strict separation of the sexes in statistics a truer estimate of the difference between the expectant and operative treatment will be formed. (*c*) In formulating any judgement as to whether operation should be undertaken, allowance must be made for the pauses and remissions which take place in the symptoms in earlier stages of the disease. (*d*) Tuberculin treatment acts as a powerful tonic in patients able to bear it, but never cures them. (*e*) By operative measures 50 per cent. of patients may be cured definitely. (*f*) Short-circuiting of the ureteric streams by ureterostomy or renal drainage is of the greatest value in abolishing the agony of an irreparably destroyed bladder.

The following papers have been accepted, and as many of them will be read as time permits:

Dobson, J. F. The Treatment of Gastric Ulcer by Excision and Partial Gastrectomy.
Don, A. Complete Excision of the Haemorrhoidal Area, with Results of Cases.
McGavin, Lawrie H. Results of Filigree Implantation in Hernia.
Dalziel, J. K. Interstitial Enteritis.
Wheeler, W. I. de C. The Surgery of the Sacro-iliac Joint.
Edington, G. H. Observations on Laceration of Large Arteries.
Newbolt, G. P. Successful Ligature of the First Part of the Left Subclavian Artery for Aneurysm in a Female.
Freyer, P. J. One Thousand Cases of Total Enucleation of the Enlarged Prostate.
Bickersteth, R. A. Obstruction of the Ureter due to (1) Kinking over a Branch of the Renal Artery; (2) Renal Calculus; How the Shape of the Kidney is Differently Affected by these two Conditions.
Clay, John. *X*-Ray Examination of the Urinary Passages.
Paterson, H. J. A Series of One Hundred Consecutive Cases of Acute Appendicitis: Immediate and Remote Results.
Howell, J. The Chief Use of the Peritoneum: A Suggestion.
Ewart, W. Pre-operative Diagnosis of Appendicitis.
Handley, W. S. Trans-articular Operations for Fractures near the Knee and Elbow.

A special meeting of the Section will be held at 2.30 p.m. on Thursday, July 25th, to discuss the report of the Fractures Committee.

TROPICAL MEDICINE.

President: Professor John L. Todd, M.D., McGill University, Montreal.

Vice-Presidents: Fleet Surgeon P. W. Bassett-Smith, C.B., R.N., Royal Naval Hospital, Haslar; W. Carnegie Brown, M.D., M.R.C.P., London; W. T. Prout, M.B., C.M.G., Liverpool; J. W. Watson Stephens, B.A., M.D., School of Tropical Medicine, Liverpool; A. J. Chalmers, M.D., F.R.C.S., London.

Honorary Secretaries: B. Blacklock, M.B., Runcorn Research Laboratories, Crofton Lodge, Runcorn; H. B. G. Newham, M.R.C.S., Director, London School of Tropical Medicine, Albert Dock, London, E.

The following is the provisional programme:

Wednesday, July 24th, 10 a.m.—Papers: (1) Human Trypanosomiasis, (2) Verminous Toxins in Man and Animals.

STEPHENS, Dr. J. W. W. On *T. rhodesiense* (Stephens and Fantham).
WEINBURG, Dr. (Institut Pasteur). Verminous Toxins in Man and Animals.

Thursday, July 25th.—Papers on Leprosy and Leishmaniasis:

DUVAL, Professor Charles (New Orleans). Acid-fast Bacilli from the Human Leprous Lesion.
WILLIAMS, Captain. The Results of Vaccine Treatment of Leprosy.
GABBI, Professor. Leishmaniasis.
PATTON, Dr. W. S. (Madras). Leishmaniasis.

Friday, July 26th, 10 a.m.—Papers on (1) Sanitation of Agricultural Estates in the Tropics; (2) General subjects.

BROWN, Dr. W. Carnegie. Sanitation of Agricultural Estates.
WATSON, Dr. M. (Federated Malay States). (Title not settled.)
MADDEN, Professor F. (Cairo). Lymphangioplasty in Elephantiasis of the Legs.

Honorary Local Treasurer—
THOMAS H. BICKERTON, M.R.C.S.,
88, Rodney Street, Liverpool.

Honorary Local Secretaries—
FRANK H. BARENDT, M.D., F.R.C.S.Eng.,
KARL A. GROSSMANN, M.D., F.R.C.S.Edin.,
W. THELWALL THOMAS, Ch.M., F.R.C.S.,
Liverpool Medical Institution, 114, Mount Pleasant, Liverpool.

PROVISIONAL PROGRAMME.

FRIDAY, JULY 19TH, 1912.
10 a.m.—Annual Representative Meeting.

SATURDAY, JULY 20TH.
9.30 a.m.—Representative Meeting.

MONDAY, JULY 22ND.
9.30 a.m.—Council Meeting.
10 a.m.—Representative Meeting.
7 p.m.—Secretaries' Conference and Dinner.

TUESDAY, JULY 23RD.
9.30 a.m.—Representative Meeting.
2 p.m.—Annual General Meeting.
8.30 p.m.—*Adjourned General Meeting, President's Address.

WEDNESDAY, JULY 24TH.
9 a.m.—*Roman Catholic service at the Pro-Cathedral, Copperas Hill.
9 a.m.—Council Meeting.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Medicine.
2.30 p.m.—*Service at St. Luke's Church.
8 p.m.—*Soirée*, Walker Art Gallery.

THURSDAY, JULY 25TH.
8 a.m.—National Temperance League Breakfast.
10 a.m. to 1 p.m.—Sectional Meetings.
12.30 p.m.—Address in Surgery.
7.30 p.m.—Annual Dinner.

FRIDAY, JULY 26TH.
9 a.m.—Council Meeting.
10 a.m. to 1 p.m.—Sectional Meetings.
2.30 p.m.—*Degree Convocation, Philharmonic Hall.

SATURDAY, JULY 27TH.
Excursions.

* Members are invited to wear academic costume at the following functions: The President's Address on Tuesday evening, July 23rd; the Roman Catholic Service at the Pro-Cathedral on Wednesday morning, July 24th; the Church Service at St. Luke's in the afternoon; and the *soirée* at the Walker Art Gallery the same evening. Also at the Philharmonic Hall, for the Degree Convocation, at 2.30 p.m. on Friday afternoon.

PATHOLOGICAL MUSEUM.

All communications and specimens for the Pathological Museum should be addressed to Dr. Ernest Glynn, Honorary Secretary, Thompson Yates Laboratory, University of Liverpool.

EXCURSIONS AND ENTERTAINMENTS.

THE Excursions Committee in Liverpool is making arrangements for visits to a number of interesting places on Saturday, July 27th. These include the following:

Chester and Eaton Hall.—During the morning this party will visit the cathedral and many places of historic interest in the city of Chester, and after lunch will proceed by steam-launch to Eaton Hall, where they will be entertained at tea by the Duke of Westminster.

Buxton.—The party (limited to 200) going to Buxton will, after a visit to the pump room, baths, and Devonshire Hospital, be entertained at luncheon by the Buxton Medical Society.

Southport.—This party, which is limited to 100, will visit the Infirmary and Botanic and Zoological Gardens during the morning, and will be entertained at lunch by the Southport Medical Society. In the afternoon there will be a garden party at Hesketh Park, by invitation of the Mayor and Mayoress.

Blackpool.—The party, limited to 150, will be entertained at luncheon by the Mayor and Corporation, and visits will be paid to various places of interest both in the morning and in the afternoon.

Llandudno.—Arrangements have been made for a party of 200 to proceed to Llandudno by steamer. They will be received by the Urban District Council and entertained at luncheon.

Isle of Man.—A party, limited to 100, has been invited to visit the Isle of Man, where they will be received by the Mayor and Corporation, and entertained at dinner in the evening. During the earlier part of the day motor tours have been arranged.

Penmaenmawr and Pendyffryn Hall.—A party, limited to 50, has been invited to visit Penmaenmawr, and will be entertained and luncheon at Pendyffryn Hall by Dr. Dobson.

Members desirous of taking part in any of these excursions are requested to make application for tickets to Dr. Francis W. Bailey, 51A, Rodney Street, Liverpool, on or before July 17th.

Tickets will be allotted in priority of application, and it is advisable to mention a second choice of excursion in case all the tickets for the first choice have been taken before application. In many cases the excursions can be prolonged for the week-end.

GOLF.

Members, on presentation of their membership ticket, will be allowed to play on the following links on payment of the usual green fees: Royal Liverpool (Hoylake), Formby, Wallasey, Birkdale, Woolton, West Lancashire, and Ormskirk.

The competition for the Ulster Cup will take place on Thursday, July 25th, on the Hoylake links. Any member wishing to compete should send in his name, club, and lowest handicap, certified by the club secretary, to Dr. A. Nimmo Walker, 45, Rodney Street, Liverpool.

On Friday, July 26th, there will be a golf match between members of the Association residing in Lancashire and Cheshire and the rest of the Association, which will be played at Formby Links. Names should be sent to Dr. Walker as above.

A match for ladies will be arranged between the wives, daughters, and sisters of members belonging to the golf clubs in Lancashire and Cheshire, and to all other golf clubs respectively. Ladies wishing to play are requested to send their names, clubs, and handicaps, certified by the club secretary, to Miss Walker, 45, Rodney Street, Liverpool, before July 12th.

ENTERTAINMENTS.

The Local Entertainments Committee has made arrangements for members to visit various places of interest in the city of Liverpool:

The works of the new Cathedral may be visited on the mornings of Tuesday or Wednesday. On Wednesday afternoon, between 3 p.m. and 5 p.m., parties of 10 at a time will be shown over the offices of the *Liverpool Daily Post and Mercury* and the *Liverpool Courier*. On the same afternoon the White Star Company will receive visitors on board the ss. *Cedric*, and the Allan Line on board the ss. *Corsican*. On the same afternoon the President of the Medical Institution and Mrs. Robert Jones will give a garden party at Druid's Cross, Wavertree. In the evening there will be a *soirée* at the Walker Art Gallery, lent by the Corporation of Liverpool.

On Thursday afternoon a garden party will be given by Dr. C. T. Street at Haydock Lodge Private Asylum, and by Mr. and Mrs. Frank Paul at "The Anchorage," Hoylake. Later in the afternoon the Lord Mayor and Lady Mayoress (Lord and Lady Derby) will give a garden party in the Botanic Gardens. On the same afternoon Mr. Robert Jones and Dr. C. J. Macalister will take a party of 200 visitors to the Liverpool Country Hospital for Children at Heswall. On Thursday the Booth Steamship Company will entertain visitors to tea on board the ss. *Hilary*, which will be arranged to show the mosquito-proof appliances; Messrs. Cammell, Laird and Co. will show visitors over their shipbuilding and ship-repairing yards, where the new Dreadnought *Audacious* and some Argentine destroyers are being built. A visit will be paid by invitation to the estate of the Liverpool Garden Suburbs Tenants Company, and the Mersey Docks and Harbour Board will show a party of visitors over the warehouses and docks. In the evening the annual dinner of the Association takes place, and there will be a performance for ladies of "Mrs. Gorringe's Necklace" at the Royal Court Theatre.

On Friday Lord Derby, the Chancellor of the University of Liverpool, will entertain a number of visitors at luncheon by special invitation at the Town Hall before the ceremony of conferring honorary degrees, which is to take place at 2.30 p.m. at the Philharmonic Hall. Sir William Lever will entertain a party of invited guests to luncheon at Hulme Hall, Port Sunlight, and will entertain a large party to tea in the afternoon and show them over Port Sunlight. Sir James and Lady Barr will give a garden party at Calderstones Park, and the Cunard Steam Ship Company will provide a tender to take the visitors to the *Lusitania* in the river, where they will be entertained at tea.

Arrangements have been made for a trip on the river Mersey on Wednesday afternoon, at the invitation of the Birkenhead Corporation; on Thursday afternoon one of the Wallasey ferry boats will make a similar trip, and visitors will be entertained at tea by Dr. Oldershaw, Mayor of Wallasey.

British Medical Journal.

SATURDAY, JULY 6TH, 1912.

THE PRESENT POSITION.

The present position in regard to the Insurance Act and the medical profession is that the Chancellor of the Exchequer and the Commissioners have made no material concession since February last to the demands put forward by the British Medical Association. This is the opinion of the State Sickness Insurance Committee, endorsed by the Council of the Association, and will, we do not doubt, be the opinion of the vast majority of those who read the letter addressed to the Association by the Commissioners on June 26th. It is, in fact, pretty clear that it is the opinion also of the Chancellor of the Exchequer and the Commissioners, although the Chairman of the Joint Committee of Commissioners says in the issue of *The National Insurance Weekly* for this week: "We are doing all that is possible to meet them, and I cannot imagine that the medical profession will really stand out." He does not state, however, the grounds for his expectation that the Association in July will reverse the policy it adopted in February after discussions in all parts of the country and long and anxious debate in the Representative Meeting. At the meeting in February the opinion of moderate men prevailed. The course then followed has been keenly discussed from every point of view by meetings of the profession in all parts of the country, consisting of members of the profession engaged in every kind and variety of practice, and the policy of the Association has been endorsed, such criticisms as were made having been almost altogether in the sense that the Association did not then go far enough.

The reply of the Insurance Commissioners to the letter addressed to them on February 29th, setting out, in plain and unmistakable language, in accordance with the instructions of the Special Representative Meeting held during the preceding week, the minimum demands of the Association, was received on June 26th. It was considered by the State Sickness Insurance Committee on that afternoon and again on July 1st. The letter, which embodies a statement by the Chancellor of the Exchequer on the subject of remuneration, is contained in the report to the Divisions and Representative Meeting published in the Supplement for this week, and, together with observations by the State Sickness Insurance Committee on the arguments and assertions it contains, forms Part II of that report. Those who have followed the proceedings of the State Sickness Insurance Committee, which have been reported regularly in the Journal, will find that Part I of the report in the main sets out matters with which they will already be familiar. Part II (p. 17), on the "Present Position of the Association with regard to the working of the National Insurance Act," will be that to which the majority of readers will first turn; and Part III (p. 22), on the "Future Action of the Association," should be read along with it, for it presents the alternatives between which the Divisions and the Representative Meeting will have to choose within the next fortnight.

These two parts of the report ought to be read as they stand, for no summary or gloss can give their full effect. They must make the strongest possible appeal to every medical practitioner, for every individual member of the profession must himself make up his mind between the alternatives in order to be able, at the meeting of his Division, to instruct his Representative in the Representative Meeting, with which the final decision rests. To many it seems that the answer given at Midsummer might equally well have been given at Lady Day. Had this been done there would have been no need for the haste which is now inevitable. The points in the letter which possess any savour of novelty are, with one exception, contained in the statement by the Chancellor of the Exchequer in the fifteenth and following paragraphs. They are: First, that the Government recognizes that the aggregate amount devoted to medical benefit must be such as to enable suitable payment to be made for certain extras, including night visits, mileage, and possibly other matters. Secondly, that the Government would be willing to advise Parliament to make extra provision for meeting the cost of medical benefit beyond that originally assumed in the actuarial calculations, which by implication are now admitted to have been based on insufficient data. These are indeed the most important results of the action of the State Sickness Insurance Committee. They are significant admissions, but are immediately qualified by the specific statement that the Government could hold out no nope of such provision being made as would yield for medical remuneration 8s. 6d. per insured person per annum for ordinary medical attendance, not including extra services or the cost of drugs and appliances. To this pronouncement is appended a calculation founded on a number of conjectural estimates, which brings Mr. Lloyd George to the strange conclusion that, were the demands of the profession as to remuneration for its services to be met, it would mean that the ordinary income of a practitioner in an average practice would be not less than £1,100 per annum. Some of the fallacies in this calculation are pointed out in the observations of the Committee, which are published in the report.

The only other new point in the letter is the statement that the Government recognizes that the position of persons possessed of incomes from all sources exceeding £160 a year, who, under Section 1 (3) (*b*), might continue to be insured as voluntary contributors, was a special case, and that as to this the Government would be ready to consider any suggestions the Association might make.

The alternatives presented for the decision of the Divisions of the Association during next week, and the final pronouncement of the Representative Meeting in Liverpool this day fortnight are, on the one hand, to break off, and, on the other, to continue negotiations. In the one alternative the Association will call on all practitioners to refrain from applying for or accepting any post or office of any kind in connexion with the National Insurance Act until such time as the Government has satisfied the Association that its demands will be met. The other will be to comply with Mr. Lloyd George's request to appoint a committee with power to confer with the Commissioners in order to ascertain to what extent the demands of the Association are likely to be met. Such a committee would hear what the Commissioners had to propose, would consider and report on the Regulations as soon as they were made available, and would report to a Special Representative Meeting. The Commissioners recognize that such a committee

could only arrive at a provisional agreement, which would be submitted to the members generally through the local Divisions, and to the Representative Body for ratification, amendment, or rejection.

TUBERCULIN TREATMENT.

THE gradual re-entry of tuberculin into the therapeutic field has called forth a number of guides, of all nations, who desire to point out the way of safety, and the pitfalls of danger, to all those who seek to employ it.

We have recently commented upon the latest works of the kind published in our own country, and a small work [1] from the pen of Dr. Sézary has recently been issued as one of a series of compact volumes dealing with the "actualities of medicine," each containing a study of a special subject in a more or less critical tone indicating the limitations and possibilities of each as far as modern knowledge permits.

Tuberculin treatment has at more than one period been taken up too enthusiastically and dropped too abruptly, and even now there is a manifest tendency in some quarters to vaunt its powers to a far greater extent than the collected evidence of good observers would seem to warrant. By slow degrees a better knowledge of its mode of action has been attained, but at best this knowledge is still limited within narrow bounds; and much of the theory which serves to guide our lines of thought is speculative. Hence it is to the slow and steady accumulation of practical experience that we must look, to enable us to determine the therapeutic value of tuberculin injections. Dr. Sézary gives a very candid account of his own views, and emphasizes the fact that the treatment gives good results in practice which cannot be satisfactorily accounted for in theory. In his hands, and in those of some other observers, the immunity afforded by one strain of tuberculin does not hold good when another strain is introduced, a new process of immunization having to be set up in each case. Immunity so produced does not prevent the development of the tuberculous poison itself if introduced artificially. Its action therefore, Dr. Sézary argues, cannot be called specific. It only helps the natural protective processes to help themselves, and hence is only of value when these processes still maintain their self-protective power.

The experience of observers with regard to the use of injections during periods of tuberculous activity and fever differs widely. Many German writers commend its use under such circumstances, but French schools, for the most part, adopt a more cautious attitude. After a very full account of the methods and technique of calculating and administering the dose, Dr. Sézary passes to the consideration of results, and here again he advises that theoretical considerations should be dismissed from the mind and practical issues alone be regarded. The early case and the chronic consumptive in whose lung the process is quiescent have been found to benefit greatly, but there is abundant evidence to prove that harm rather than good is liable to follow its indiscriminate use in other stages, and especially at the hands of those who have not had abundant experience of the dosage appropriate to the varying degrees of disease.

We may take this opportunity of noticing two inquiries recently made by medical journals—one German,[2] the other Danish[3]—with a view of collecting and correlating the opinions of experts in the respective countries on the merits of tuberculin in phthisis. While the German report consists of diametrically opposed views, and others which might best be described as "hedging," the Danish report reveals several important points on which the leading authorities appear to be unanimous. The questions to which answers were sent by seventeen sanatorium and hospital physicians were as follows: (1) Do you use tuberculin for treatment? (2) What are your indications for this treatment? (3) What results have you obtained? (4) Which preparations do you use and prefer? (5) What doses do you give? (6) Have you adopted ambulatory treatment with tuberculin? and Do you recommend this procedure? While nearly all the answers to the first question were in the affirmative, the indications for the use of this remedy were much limited, and were confined by most of the physicians to such cases as were stationary under sanatorium treatment or showed signs of general toxaemia, such as a tendency to slight rises of temperature, pallor, cyanosis, and tiredness. Tuberculin as a means of reducing a high temperature was not favourably reported on by most, though it was found to have a strikingly febrifugal action in a few cases. Advanced phthisis was not inevitably considered to be a contraindication, providing the disease was not rapidly progressive. At Saugman's sanatorium 5 to 10 per cent. of the patients were treated with tuberculin, and at several other sanatoriums the number of patients thus treated was relatively lower. The results obtained by tuberculin were sometimes astonishingly good; sometimes it was apparently quite inactive; and in several cases its use was followed by complications, such as pleurisy, haemorrhage from the lungs and intestines, and aggravation of pulmonary, laryngeal, and intestinal tuberculosis. Many preparations of tuberculin were in use, including Koch's tuberculin, old and new, bacillary emulsion, endotin, tuberal, and Denys's tuberculin. The question whether tuberculin is suitable for ambulant treatment is answered in the negative with no uncertain voice, and the tale of accidents, which even treatment within the walls of a sanatorium has not been able to avert, is held to indicate that this treatment should be limited to institutions where its every phase may be under close scrutiny and control. Three of the answers admit, however, that treatment with tuberculin may be continued in the patient's home if it has been satisfactorily started at a sanatorium, and if the patient is intelligent. The report, taken as a whole, gives the impression that tuberculin is a two-edged sword, the wielding of which in untrained hands must be followed, sooner or later, by incidents disastrous to the patient and damnatory to the good name of the physician and the remedy. On the other hand, employed by those whose respect for its potency is considerable, tuberculin may effect wonders, astonishing even to the physician.

[1] *Tuberculinothérapie et sérothérapie antituberculeuse.* By Dr. Albert Sézary of the Laënnec Hospital in Paris. Paris: J. B. Baillière et Fils. 1912. (Cr. 8vo, pp. 96. Price 1 fr. 50 c.)

[2] *Med. Klinic*, No. 1, 1910. [3] *Hospitalstidende*, No. 4, 1912.

THE REPORT OF THE STATE SICKNESS INSURANCE COMMITTEE.

THE State Sickness Insurance Committee held its sixteenth meeting on Monday last, and rendered an account of its labours to the Council. The Council, at its meeting on Wednesday, directed the issue of the report on the Insurance Act, embodying an analysis of the present position of the Association thereto, which is published in the SUPPLEMENT for this week. The report—containing as

it does a summary of the events of the last five months, as well as the reply of the Insurance Commissioners to the letter addressed to them setting out the minimum demands of the profession, and a criticism of this reply—is necessarily very voluminous, and its length is increased by the printing of appendices required for reference. In consequence it has been necessary to postpone publication in the SUPPLEMENT of much matter recently received, including a good deal of material already in type. The full programme of the Annual Meeting in Liverpool, including the synopses, so far as received, of papers introducing the discussions in the Sections, which begin on July 24th, is published in the JOURNAL, p. 23, and its length has rendered it necessary to postpone the publication of much other matter. We can only apologize to many correspondents for the postponement of the publication of their communications, which is in the circumstances inevitable.

SANATORIUM BENEFIT.

A MEETING of the medical members of the Advisory Committee with the Insurance Commissioners was held on Wednesday morning, when Sanatorium Benefit was discussed for a couple of hours. The subject was divided into two parts, the provisional arrangements to be at once made, and permanent arrangements, but practically the whole of the discussion was devoted to the former subject. The report to the Representative Meeting, published in the SUPPLEMENT this week, contains a series of paragraphs (76 to 99) on sanatorium benefit in which the recommendations in the interim report of the Departmental Committee on Tuberculosis are analysed and certain recommendations made. These recommendations are necessarily of a somewhat conjectural nature, inasmuch as the regulations for the administration of sanatorium benefit, which is to come into force on Monday week, have not yet been promulgated. These regulations must set out not only the conditions under which persons are to become eligible to enjoy the benefit, but also the conditions and terms of service of the medical profession. In this connexion the importance of fully recognizing the relation of general practitioners to the system which is to be established is insisted upon in the report. The first recommendation is that while the chief tuberculosis officer of the dispensary should be a whole-time officer and confine himself to diagnosis and consultative work, the rest of the staff should, if possible, be formed of local medical practitioners serving on a rota. Another recommendation is to the effect that domiciliary attendance should be given by the tuberculosis officer or any whole-time assistant only as a consultant to the practitioner in attendance. It is also recommended that those requiring attention at the dispensary should be introduced only on the recommendation of the medical practitioner actually in attendance upon the patient, and that the services of the medical practitioner, whether for domiciliary attendance or attendance in a dispensary or sanatorium, should be properly remunerated.

"MORE SECRET REMEDIES."

THE little book issued by the British Medical Association, under the title, *Secret Remedies: What they Cost and What they Contain*, has had a very large sale, and there has been a great demand for a continuation of the work. The field of quackery is so vast that it is impossible to cover it all at once; but, though justice follows the evil-doer with halting step, it generally overtakes him in the end. Inspired by this hope, the Association has steadily, though without haste, pursued its purpose of exposing the pretensions of nostrum vendors. We are sure our readers will be as pleased to learn as we are to announce that a further volume, entitled *More Secret Remedies*,[1] has just been issued. In addition to analyses of a large number of "remedies" for rheumatism, gout, neuralgia, skin affections, nerve tonics and elixirs of life, medicines for coughs and consumption, indigestion and constipation, kidney disease, alcoholism and the tobacco habit, epilepsy, soothing syrups for infants, amenorrhoea, and a variety of other ailments, there are three chapters on general subjects of special interest. These are on unqualified practice through the post, the advertising of proprietary medicines, and the "expert" behind the proprietary medicine. We propose to deal more fully with the volume in an early issue; this brief note is to be regarded merely as an announcement of its publication.

DEPUTY MEDICAL SECRETARY.

AT the meeting of the Council, on July 3rd, Dr. James Neal, of Birmingham, was appointed from a long list of candidates to be Deputy Medical Secretary of the British Medical Association. Dr. Neal, who has been engaged in general practice in Birmingham for twenty years, has long taken great interest in medico-political work, and has done much such work for the British Medical Association. He has been a member of the executive committee of the Central Division of the Birmingham Branch since the reconstitution of the Association, Chairman of the Division, Representative of the Division on the Branch Council, and for the last three years Representative of the Division in the Representative Meeting of the Association. He is also a member of the Central Ethical Committee, a member of the State Sickness Insurance Committee, and was nominated by the Association on the Advisory Committee under the National Insurance Act. Dr. Neal has been for thirteen years Secretary of the Birmingham and District Medical Practitioners' Union.

LORD ROSEBERY ON THE MEDICAL PROFESSION

ON July 1st Lord Rosebery distributed the prizes at the London Hospital Medical College. He took occasion to contrast the medical student of the present day with the types created by Dickens. Lord Rosebery professed to believe that Bob Sawyer and Ben Allen were mere monsters developed by the novelist out of some germ and offered as such to the attention of "the great peripatetic philosopher, Mr. Pickwick." We think that Dickens was merely indulging his natural bent to caricature, and that, although he exaggerated the features, he found the originals of his immortal sketches among the medical students of the early Victorian period. *Pickwick* was published in 1837, and Albert Smith's "Physiology of the London Medical Student" appeared in *Punch* in 1841. Smith knew what he was talking about, for he had been bred to the medical profession, and his picture of the medical student has all the repulsiveness without the humour of that of Dickens. With the Medical Act of 1859 and the enforcement of a larger curriculum there came a change. In the transition period which extended to the Seventies the Bob Sawyer type began to die out, and as examinations were made stricter it became extinct. Another influence leavening the mass that must not be neglected is the increasing degree to which Oxford and Cambridge men entered the profession. Between thirty and forty years ago they were exceptional; now in every London school of any size they are numerous. We believe that at the hospital where Lord Rosebery delivered his speech, of a resident staff of more than thirty one-half are Oxford or Cambridge men. Lord Rosebery went on to deplore the passing of the apothecary—a "good old name" which he prefers to "general practitioner." We

[1] *More Secret Remedies: What they Cost and What they Contain. Based on Analyses made for the British Medical Association.* London: The British Medical Association. 1912. (Cr. 8vo, pp. 282.) To be obtained through any bookseller, price 1s., or from the offices of the Association, price 1s. 3d. post free.

confess we do not follow the brilliant orator here. "Apothecary" smacks of the shop, and had in fact about the time when Bob Sawyer flourished become a misnomer. Some seventy years ago a protest was made against it, and in a document quoted by Mr. C. R. B. Barrett in his *History of the Society of Apothecaries* there is the following passage: "The Court of Examiners feel that one of the chief evils in the present position of the Apothecary is his name, which has little reference to his actual duties, that he is in fact the Medical Attendant on the large mass of the community, and should be designated the General Practitioner of Medicine." When ladies spoke of "using the 'potecary" they thought of him as a mere tradesman; indeed, there were many, like Lady Chettam in *Middlemarch*, who preferred the ministrations of "a medical man more on a footing with the servants," as for some obscure reason she thought they were often much cleverer. That time is past, and as medicine has grown beyond the bottle of physic, which seems to be Mr. Lloyd George's ideal of medical practice, it has gone upward in the social scale. One good result of this is that general practice now attracts men who, in the early part of the last century, would have thought it beneath them. Lord Rosebery went on to speak of medicine as the noblest secular career in the world, because it is the one and only secular profession which tries, wherever it goes, unselfishly, willingly, earnestly, to give comfort and alleviation to all with whom it deals. But he looks upon it as a forlorn hope, because it never can hope to conquer in the long run, as when one disease has been overcome, another springs up to take its place. "You are fighting," said Lord Rosebery to the students, "with the Angel of Death which must defeat you in the end." To raise the drooping spirits of his hearers after this pessimistic view of medicine, Lord Rosebery went on to say that in all professions it is rare to find a life which can be spent in the complete conquest of obstacles, but doctors are fighting the most heroic fight that is going on in the world, and fighting it not in their own selfish interests, but in the cause of humanity itself. This is true, of course, though more banal than we expect from Lord Rosebery. At this time of struggle against an attempt to buy the services of the doctor in the cheapest market, it may be well to remark that statesmen have a convenient way of forgetting that even doctors are not philanthropists and cannot live on compliments to their profession. Lord Rosebery weighs the great names of history—the Caesars, the Charlemagnes, the Napoleons, the Wellingtons—against Lister, and exclaims, "Does any intelligent human being hesitate as to which side it is that the balance of universal gratitude of mankind is due?" That it is due is certain; but is it paid? Lister was loaded with distinctions in his lifetime; but it surprised not a few persons who would be astonished to hear themselves described as lacking intelligence, that the King should delight to honour a mere doctor. For to most of those who spend themselves in the effort to prevent or suppress disease and to relieve suffering, virtue is its own reward.

THE INSTITUTIONAL USE OF ALCOHOLIC LIQUORS.

IN drawing attention to the diminished use of alcohol in hospitals, *The Hospital* has expressed a doubt whether the lessened prescription of alcohol, a diminution it puts at 80 per cent., is justified by results. If it is meant to imply that the ratio of recoveries to deaths and the length of time the patients remain in the wards compare unfavourably with the days of a freer use of alcohol, there can be only one answer. The patients recover at least as satisfactorily, and their average stay in hospital is shorter than in the days of a freer prescription of alcohol. It is suggested that "so-called temperance drinks and more expensive synthetic and chemical stimulants" have taken the place of alcohol. But it is the milk bill and not the drug bill which has increased at the expense of alcohol. In 1862 seven large London hospitals, with 2,254 occupied beds, spent £7,712 on alcoholic liquors; forty years later, with 2,309 occupied beds, they spent £2,925. But in the same time the milk bill rose from £3,026 to £9,035. At Salisbury, in 1865, the alcohol bill was £302 and that for milk £94; forty years later the cost of alcohol was £18, of milk £317. If more expensive synthetic and chemical stimulants are being used the increased cost ought to show in the drug bill. In 1894 the average "surgery and dispensary" expenses at the twelve chief London hospitals was £12.6 per occupied bed; in 1910 it is given as £13.7. But whereas the figures for 1910 include the expenditure on alcohol, those for 1894 do not. As surgical dressings, bandages, instruments, and appliances swell the figures for 1910 there would seem little ground for the assumption that costly drugs have taken the place of alcohol in the hospital armamentarium. As milk has taken the place of alcohol among provisions, so strychnine, one of the cheapest drugs, of which enough to kill a household can be bought for a few coppers, is often used where formerly alcohol would have been employed. That more expensive substances have taken the place of alcohol is far from being proved. *The Hospital* pleads for the addition of beer to the dietary of convalescents, and maintains that it is to be preferred to the "aërated waters flavoured with fruit syrups or the generally indifferently-made cocoa or tea which is served out in most wards." But it is not the convalescent patient who gets aërated waters; it is the sufferer from acute symptoms, with a high temperature and thirst, for which the aërated beverage is a welcome assuager. Tea and cocoa do not make their appearance more often than at breakfast and tea-time, according to the custom of the country. If they are badly made that is due to bad methods, or want of supervision permitting carelessness, and ought to be remedied. If beer were to be substituted for them, at these meals, there would be something like a hunger, or a thirst, strike among the patients. At the mid-day meal, when it is perhaps the custom of the people not in hospitals to take beer, the medical staff has full power to order or withhold it. Hospitals are staffed neither by teetotal enthusiasts nor pro-alcohol advocates, but by men of sane, moderate views. In their hands the prescription of alcohol may safely be left, and we may rest assured that if they see reason to increase the quantity of alcohol their patients are taking they will not be deterred from prescribing it, either by extreme views or sentimental reasons.

THE INHABITANTS OF ANCIENT NUBIA.

PROFESSOR ELLIOT SMITH is one of the highest authorities on the human archaeology of ancient Egypt, and in the second volume of the *The Archaeological Survey of Nubia*[1] he gives the results of a laborious investigation of the human remains in that country, which is immediately coterminous with Egypt, and extends from Assuan southwards to Dongola. There are certain anatomical peculiarities which distinguish the bodies found in Nubian cemeteries from those of ancient Egyptians, and the investigation was undertaken with the object of determining the racial characteristics. When Dr. Elliot Smith went to Shellal in October, 1907, to begin the work, more than 2,000 bodies were already awaiting examination, and every day added to their number. Dr. Elliot Smith could snatch only an occasional week from his duties at the Cairo School of Medicine for the work. It was therefore necessary to obtain the services of an anatomist who would live in the camp and give himself up wholly to the investigation. This task was undertaken by Dr. Wood Jones, who made full measurements of almost every body brought to light during the excavations. The report

[1] *The Archaeological Survey of Nubia.* Report for 1907–8. Vol. ii.: Report on the Human Remains. By G. Elliot Smith, M.A., M.D., Ch.M., F.R.S., and F. Wood Jones, M.B., B.Sc. Cairo: National Printing Department. 1910. Price £E.2.

now published is only a summary of field notes and of their impressions of the significance of the results so far obtained. The final conclusions must be left till the study of the collection is complete. It is impossible within the space at our disposal to do more than give a summary of the contents of this magnificent work. A chapter of special interest is that in which Dr. Wood Jones describes the mode of burial and treatment of the body at various periods and in different cemeteries. Dr. Wood Jones also gives accounts of anatomical variations and the determination of the age and sex of skeletons; of general pathology, including diseases of the teeth; and of fractured bones and dislocations. In the examination of some 6,000 bodies no traces of tubercle, syphilis, or rickets were found, but the reader is warned that it cannot be concluded from this that these conditions did not exist. It may legitimately be inferred, however, that they were far rarer than they are to-day; but Dr. Elliot Smith states that he found a typical case of advanced Pott's disease, and several examples of apparent tuberculous disease of the spine were found in Lower Nubia by Dr. Derry, who also came across an instance of malignant disease. It is often said that marks of conservative dentistry are frequently met with in mummies; this is denied by Dr. Wood Jones, who thinks that the statements are probably to be explained by the finding in the oral cavity of pieces of gilt from the facial adornment of the dead. A good many specimens of fractured bones were found. Reference is made to a paper on this subject by Dr. Elliot Smith, which was published in the British Medical Journal of March 28th, 1908, in which some examples of splints were described. Dr. Wood Jones remarks that considering the gravity of fractured femur, and the very bad results that are liable to follow this accident, even to-day, cases found in this investigation show "a remarkably good standard of repair, and they illustrate the fact which comes out again and again in the study of these ancient fractures—that there is a wonderful natural self-adjustment in the processes of the mending of broken bones." Examples of fracture of the leg are rare in Egyptian cemeteries. "The absence of fracture-dislocations of the ankle-joint," says Dr. Wood Jones, "is very striking, and considering the great frequency of this accident to-day, it argues something in the environment of these people very different to that of dwellers in modern cities." The racial problem is discussed by Dr. Elliot Smith and a summary of the literature relating to Nubia by H. W. Beckett appears as an appendix. Another appendix consists of a chemical report on samples of various materials found in Nubia during the progress of the Archaeological Survey, by Mr. A. Lucas. A separate volume contains the plates illustrating the work; they are beautifully executed. We have only lightly skimmed the surface of a most interesting and valuable contribution to archaeology. All Egyptologists are under a deep debt of gratitude to Dr. Elliot Smith and Dr. Wood Jones for the results of an investigation which, though a labour of love, must nevertheless have involved self-sacrificing devotion to the elucidation of historical and anthropological problems.

THE PROBLEM OF RAT DESTRUCTION.

A method of destroying rats has been devised by Mr. Rodier, of Hawthorn, Victoria, Australia, the general plan of which may be summarized as follows: As many rats as possible are caught alive. All females amongst those are killed, while the males are liberated, being marked in a suitable manner, so that if caught a second time they will not be recounted. If carried out on a large scale this results in there being many more males than females, and a state of polyandry instead of a state of polygamy results. A struggle for the females by the males ensues, and few or no offspring are produced. The males, according to Rodier, persecute the females so that they do not breed, they also kill what young ones are born, and finally, when they largely exceed the females, worry the remaining ones to death. The success of the scheme evidently depends on the truth of these premisses, and, though Mr. Rodier has not proved his point as regards rats, yet he claims he has done so with rabbits in Australia. He asks that his method should be given a fair trial on its merits over a good-sized area of country, and for a term of years. One of the main difficulties in the scheme would seem to be the catching alive of all the rats of a district in the first instance, but, if this were accomplished, even though by no means completely, an excess of male rats would probably act much more quickly than an excess of male rabbits, because the former are much more deadly fighters than the latter.

INSTITUTIONS FOR THE DEAF.

In the course of two lectures recently delivered under the auspices of the National Bureau for Promoting the General Welfare of the Deaf, Dr. Kerr Love put in a strong plea for widening of the scope of institutions for deaf and dumb children. Hospitals, he pointed out, were originally merely houses of refuge; then they became places of treatment for all kinds of medical and surgical diseases, and now they were attaining their highest function, since within their walls were elaborated preventive measures which would control and, to a large extent, distinguish disease. So it must be with institutions for the deaf; they had begun as merely asylums, and now were well conducted educational establishments. But they must develop further; a spirit of research must fill them, and they must help to prevent deafness. The basis of any serious attempt to prevent deafness must be correct classification, and this in its turn should rest, not on the date of the onset of deafness, but on its pathology. For this reason the schedules relating to the admission of children to institutions should record not only the personal and family history of the child, but data derived from careful clinical examination. We gather that in Dr. Kerr Love's view hereditary deafness is comparatively rare. Neither the existence of a deaf and dumb brother or sister, nor of slight deafness among other relatives was, he said, any proof of the heredity of deafness in any given child. With a view to the prevention of acquired deafness, he advised that aural clinics should be established in connexion with the public elementary schools, that otologists should treat aural complications of infectious diseases, and that all forms of meningitis should be notified. The three main causes of acquired deaf-mutism were scarlet fever, measles, and meningitis, and of these the last was the most important. Though public bodies spent large sums on isolating and treating cases of scarlet fever and measles, they seldom thought it worth while to pay for special skill in treating the ear complications of these diseases while the child was in hospital; as a consequence children were often dismissed from isolation hospitals and like places with discharging ears, which, apart from being infectious, tended to give rise later on to distressing and dangerous sequelae. The result of a series of inquiries he had addressed to the managers of institutions for the deaf both in this country and in the United States and Holland had been to convince him that the data available on the subject of deaf-mutism, including its origin and effects, were very unreliable.

PEMPHIGUS NEONATORUM.

Drs. Wanklyn and Macrory have made a report[1] to the London County Council on an outbreak of a disease

[1] Report to the London County Council, by Dr. Wanklyn and Dr. Macrory, on an outbreak of a disease resembling pemphigus among infants attended by a certified midwife. London: King and Son. Price 2d.

resembling pemphigus neonatorum. The cases number 16, and 15 occurred in the practice of one midwife during a period of one month. The first of the series of 15 cases attended by the midwife had been also looked after by a woman who had previously nursed a newborn infant which had had blisters on the skin, and this woman's own two children had had "eczema." The midwife had had a sore upon the finger (apparently a phlyctenule) during the early part of the period in which the subsequent 15 cases occurred in her practice. The clinical details of the cases are given very fully. All the infants developed blisters of various sizes in different parts of the body, and four died. The epidemic described is an example of the affection now recognized as a form of impetigo contagiosa. The initial lesion is a vesicle which in older children rapidly dries into a crust, but which in infants becomes a bulla. Such epidemics were common before the days of antiseptic midwifery; sporadic cases are still not infrequent, and small epidemics are recorded from time to time. These cases are like ordinary impetigo contagiosa of streptococcic origin, not staphylococcic as was formerly supposed. With proper technique it is easy to demonstrate streptococcus in the lesions, and infants which die have streptococci in the blood. The report does not contain particulars of any bacteriological investigations which may have been made in the epidemic now described. From the information obtained it seems probable that infection had taken place from child to child by means of the nurse's apron. At one period the midwife had a blister on the finger, as is often the case, and this condition, it is important to recall, sometimes gives rise to puerperal septicaemia or infection in the mother, so that the affection may be a dangerous infectious disease, not only so far as the infant is concerned but also as regards the parent.

BUXTON WATERS.

LAST summer, as has already been duly recorded, the authorities of Buxton determined to make an examination of the precise source of the spa water, and their investigation, among other interesting results, showed that the water in St. Anne's Well represented two distinct springs, one hot and one cold. It was also found that the hot spring was markedly radio-active, and it was determined to utilize it separately. The pump room was extended backwards, so as to bring it closer to the spot at which the spring had been tapped, and the work having been completed the reopening ceremony was performed by the Duke of Devonshire. In the course of the proceedings, Mr. McKower, D.Sc., gave a short account of the radio-activity of the water as determined by his analyses. He believed that it must pass over radium deposits, but it was still a matter for study how such supplies could best be utilized. Other speakers were Dr. William Ewart, of London, who pointed out that Buxton water contained a higher percentage of nitrogen gas than any other known mineral water in this country, Sir James Barr, and Professor McArdle, of Dublin. The new well, which is elliptical in shape, and measures 6 ft. at its longest diameter, is sunk in cement and lined with white Sicilian marble. The basin is some 2 ft. deep, and the water constantly flows through it at the rate of 60 gallons a minute. With a view to securing the effect of the emanation which may be assumed to be evolving from its surface, the water is not covered in, and will be distributed in glasses from the open well.

THE University of Glasgow has conferred the honorary degree of LL.D. upon Sir Hector C. Cameron and Dr. D. J. Mackintosh, of Glasgow.

UNDER the will of the late Mr. William Johnston, of Kelvinside, Glasgow, the Western, Royal, and Victoria Infirmaries in that city each receives bequests for the endowment of beds, the two former £4,000 and the latter £2,000.

THE INSURANCE SCHEME.

STATE SICKNESS INSURANCE COMMITTEE.

Fifteenth Meeting.

THE fifteenth meeting of the State Sickness Insurance Committee was held on June 27th.

Mr. T. JENNER VERRALL was in the chair, and the members present were: *England and Wales:* Dr. R. M. Beaton (London), Dr. John Brown (Bacup), Dr. T. M. Carter (Westbury-on-Trym), Miss Frances Ivens, M.S. (Liverpool), Dr. Constance Long (London), Mr. James Neal (Birmingham), Dr. F. H. Oldham (Morecambe), Dr. James Pearse (Trowbridge), Dr. F. M. Pope (Leicester), Dr. E. O. Price (Bangor), Dr. Lauriston E. Shaw (London), Dr. W. Johnson Smyth (Bournemouth), Dr. D. G. Thomson (Thorpe, Norwich), Dr. D. F. Todd (Sunderland), Mr. E. B. Turner (London), Dr. A. H. Williams (Harrow on the Hill), Mr. D. J. Williams (Llanelly), Mr. E. H. Willock (Croydon). *Scotland:* Dr. J. Adams (Glasgow), Dr. Bruce Goff (Bothwell), Dr. J. Munro Moir (Inverness). *Ireland:* Dr. Mark Cahill (Belfast), Dr. J. S. Darling (Lurgan). *Ex Officio:* Dr. E. J. Maclean (Chairman of Representative Meetings).

Apologies for absence were read from the President (Professor Saundby), Dr. R. E. Howell (Middlesbrough), Dr. R. A. Lyster (Winchester), Dr. S. Hodgson (Salford), and Dr. Dampier Bennett (Dublin).

We are enabled to publish the following account of the proceedings in anticipation of the confirmation of the minutes.

MEDICAL PRACTITIONERS AND PROVISIONAL INSURANCE COMMITTEES.

In reply to various inquiries, the Committee reaffirmed the principle embodied in the letter which it directed to be addressed to the National Health Insurance Commission (England) on May 31st (SUPPLEMENT, p. 600), and in the resolution adopted by the Committee on June 7th (BRITISH MEDICAL JOURNAL, June 15th, p. 1384). The letter to the Commissioners stated that it was "impossible for the Association to assist the Commissioners in the manner indicated—namely, by obtaining from various Provisional Medical Committees of the Association, the names of representatives for the suggested Provisional Insurance Committees, until such time as the Association is satisfied that the minimum demands of the medical profession in regard to the Act are, or will be, conceded." The resolution of June 7th contained the proviso as follows: "That, so far as practitioners are concerned who are members of county or county borough councils, and who are appointed by their councils *quâ* members to fill positions which could equally well be filled by laymen and not *quâ* medical practitioners to fill positions which could only be filled by medical practitioners, the Committee raises no objection to the acceptance of such appointments." With regard to medical officers of health, the Committee also reaffirmed the view expressed at its meeting on June 20th, in which it called attention to the fact that, as provided by Minute 80 of the Special Representative Meeting of February, 1912, a medical officer of health is not precluded "from giving advice to an Insurance Committee in his professional capacity," though, in accordance with Minute 78 he should not accept office as a member of the Committee.

Later in the meeting Mr. TURNER moved the suspension of standing orders in order to move the rescission of the resolution of the Committee on June 7th above referred to. After discussion Mr. Turner, with the consent of the meeting, withdrew his motion.

INQUIRY INTO EXISTING CONDITIONS OF MEDICAL WORK AND REMUNERATION.

Resolutions were received from five Divisions expressing disapproval of the Committee in promising to give the Insurance Commissioners its assistance in carrying out the actuarial inquiry proposed by the Government and entrusted to Sir William Plender, the actuary selected by the Association.

Dr. JOHN BROWN gave notice that he would at a future meeting move the suspension of standing orders in order to move the rescission of the minute of June 12th promising to give the assistance mentioned.

Resignation of Appointments.

The Secretary of the Leicester and Rutland Provisional Medical Committee reported that resignations of all forms of contributory contract practice in Leicestershire and Rutland were about to be sent in.

Attendance upon Accidents.

An inquiry from the honorary secretary of a Provisional Medical Committee was received asking for more definite information upon the question whether payment for medical attendance covered attendance upon accidents. The Committee resolved to reply that it assumed that the fee of 6s mentioned in the actuaries' report of May, 1911, did not include attendance upon insured persons in respect of accidents, and that it was seeking to safeguard the interests of practitioners in this respect by urging that the regulations should provide that attendance upon insured persons for injuries or disease referred to in Section 11 of the Insurance Act should be made an extra.

Supplementary Pledge and Sanatorium Benefit.

In reply to an inquiry from the Edinburgh Provisional Medical Committee, the Committee stated that the footnote appearing on the supplementary pledge, to the effect that the third paragraph of the pledge did not refer to the administration of sanatorium benefit, was intended to exempt from the operation of that paragraph those medical practitioners at present holding office in sanatoriums, but did not refer to the acceptance of fresh appointments in connexion with sanatorium benefit under the Insurance Act.

Attendance upon Insured Hospital Nurses.

In reply to an inquiry received on behalf of the medical staff of a provincial infirmary, the Committee adopted the following resolution:

> That in the opinion of the Committee, where arrangements are made for attendance upon nurses as insured persons (whether by members of the paid or honorary medical staff of a voluntary hospital or otherwise), care should be taken (i) that such medical practitioners are adequately paid for the treatment of such nurses; and (ii) that the nurses should not be deprived of the right to free choice of doctor, granted them under the Act.

Appointments under the Act.

In reply to an inquiry, the Committee expressed the opinion that neither the original undertaking nor the supplementary pledge barred practitioners from accepting appointments such as medical inspectorships under the Act before the Association's demands had been conceded, but that the acceptance of such appointments would be contrary to the terms of Minute 78 of the Special Representative Meeting of February, 1912, under which members of the Association were barred from accepting any appointments under the Act.

Commissioners' Reply to the Minimum Demands.

The Committee proceeded to consider the letter from the Joint Committee of Insurance Commissioners received that day. The Committee, after a preliminary discussion, resolved to meet again on July 1st to conclude the discussion of the matter, and draft its report to the Council. The letter, with the observations of the Committee thereon, is published in the Supplement, p. 2.

Tuberculosis Scheme.

A report from the Regulations Subcommittee on the tuberculosis scheme outlined in the interim report of the Departmental Committee on Tuberculosis was received. The report having been discussed and emended the Committee resolved to embody it in the report to the Council (Supplement, p. 16.)

Sixteenth Meeting.

The sixteenth meeting of the Committee was held on Monday, July 1st, 1912, at 2 p.m.

Mr. T. Jenner Verrall was in the chair, and the members present were: *England and Wales:* Dr. R. M. Beaton (London), Dr. John Brown (Bacup), Dr. T. M. Carter (Westbury-on-Trym), Dr. S. Hodgson (Salford), Dr. R. E. Howell (Middlesbrough), Dr. Constance E. Long (London), Dr. R. A. Lyster (Winchester), Mr. James Neal (Birmingham), Dr. F. H. Oldham (Morecambe), Dr. James Pearse (Trowbridge), Dr. E. O. Price (Bangor), Dr. Lauriston E. Shaw (London), Mr. E. B. Turner (London), Dr. A. H. Williams (Harrow on the Hill), Mr. E. H. Willock (Croydon). *Scotland:* Dr. J. Adams (Glasgow). *Ireland:* Dr. Mark Cahill (Belfast). *Ex officio:* Dr. E. J. Maclean (Chairman of Representative Meetings).

Apologies for absence were read from the President (Dr. Saundby), Chairman of Council (Dr. Macdonald), Dr. Munro Moir (Inverness), Dr. Thomson (Thorpe, Norwich), Dr. Todd (Sunderland).

Inquiry into Existing Conditions of Medical Work and Remuneration.

It was reported that, excluding Cardiff, where the proposal was still under consideration, only six practitioners in the five other towns selected had declined to place their books at the disposal of the actuary. This includes Darwen, as to which there was no information last week.

Report to Council.

The whole of the time of the Committee, which sat until 8 p.m., was occupied in considering its report to the Council on the work done by the Committee since it was appointed at the Special Representative Meeting at the end of last February.

The report was presented to the Council at its meeting on July 3rd, and after discussion was directed to be submitted to the Divisions and to the Annual Representative Meeting, which assembles in Liverpool on July 19th. The report is published in the Supplement for this week.

Next Meeting.

The Committee arranged to meet again on Thursday, July 11th.

Medical Notes in Parliament.

[From our Lobby Correspondent.]

Tropical Medicine.

When the vote for the Colonial Office came on last week, the Secretary for the Colonies took the opportunity of making a preliminary statement on the work of his Department. His well-known personal interest in medical studies led the House to expect a full reference to the progress of tropical medicine, and, indeed, he delighted his audience by a most interesting review of this subject. He said:

Our Crown Colonies enjoy, or suffer, not only all the ordinary diseases of the temperate zones, but they add for themselves most of, if not all, the pestilences of the tropics. With the modern advance of medical science we are happily able to look to, and depend more on, prophylaxis than on cure. When American care and genius has turned Panama into a health resort, there need be no limit to our hopes for the future. The discovery of the mosquito as the carrier of malaria, the study of its life-history, and the methods of its destruction, have put a new engine of hygienic progress in the hands of our medical staff. The recent realization that the Stegomyia of yellow fever finds its favourite birthplace in the rejected and rain-filled jam-pot has enabled elementary sanitation greatly to diminish this fell disease. In Ceylon ankylostomiasis (called here the "Cornish tin miners' disease") is being treated by prophylactic methods, and more than one West Indian Government is dealing, or preparing to deal, with the same disease.

Syphilis and Yaws.

Throughout most of our tropical possessions the natives are being dealt with, where and when possible, for the all-pervading and decimating disease of syphilis, both by the old mercurial and by the newer and more successful salvarsan treatment. This drug—till recently known as 606, from the number of the experiments by which it was procured, has occasionally and locally fallen into disrepute owing to some toxic mishaps arising from its arsenical origin, but on the whole its curative effects have been both rapid and permanent. It is not, however, a drug which can be easily exhibited to large numbers of ignorant

natives; its full effect can only be obtained by intravenous injection, a more elaborate and delicate process than that of subcutaneous injection, and, in any case, it is found difficult, without compulsory powers, which do not exist, to retain the native for full and final treatment after the painful symptoms have subsided, but before the cure is complete. I must, however, in relation to salvarsan, mention the extraordinary results obtained with it in Ceylon and Trinidad, in the treatment of a disease known as yaws (or framboesia, from the character of its pustular rash). The experimental use of salvarsan was suggested by the similarity of some of the symptoms to those of syphilis, though the origin and character of the disease is wholly different. We owe the discovery of its effect on yaws to Dr. Strong, of the United States Service in the Philippines, and indepedently to Professor Castellani, of Ceylon. The credit of the definitive results are due to Dr. Rost, of the German navy, and Drs. Cleaver and Alston, of Trinidad. In the Yaws Hospital in Trinidad, during last year, 500 patients were treated with salvarsan for this complaint, and the cures amounted to close on 100 per cent., so that at last we are able to regard this distressing malady as a curable and preventable disease.

Leprosy: Beri-beri.

In British Guiana experiments on leprosy with nastin and benzoyl chloride, which at one time gave much hope of success, have unfortunately belied their early promise. But in the Federated Malay States the Research Institute at Kuala Lumpur has attained the almost certain diagnosis of the cause of beri-beri. This disease seems to be the product of the consumption by an exclusively rice-eating population of a highly-polished commercial rice, from which, in the process of polishing, the phosphorus pentoxide has been removed with the pericarp. I hardly venture, in the presence of some of my ultra-humanitarian friends, to mention an interesting and conclusive experiment by which you can practically kill a fowl by the prolonged administration of polished rice and revive it with a meal of the missing husk.

Malaria.

Just now I referred to malaria, and I should like in passing to mention the steps which are being taken in the West Indies to deal with this disease. Those of us who have suffered from it (and I am one) are sadly conscious of the weary soaking in quinine till deafness supervenes, and the occasional alternative of arsenic with cumulative discomforts, insufficiently compensated by an improved complexion. In Jamaica and British Guiana antimalarial measures have been vigorously and, on the whole, successfully applied; swamps have been filled; mosquito-infested bush has been cut down; quinine has been imported by the Government and sold at cost price on sugar estates and at the post offices, and on many estates distributed free to the labourers; open drains have been cleaned and stocked with fish to eat the larvae; the empty sardine tins and the broken bottles have been buried or removed; water receptacles have been compulsorily screened from infection, and popular lectures, both on mosquitos and the preventive use of quinine, have been delivered by medical officers and others. The results have well repaid the labour. In British Guiana the recorded cases of malarial treatment were, in 1907, 34,000; in 1911 they were 21,000—a reduction of 38 per cent., which appears to be entirely due to the antimalarial measures which have been taken.

Sleeping Sickness.

But undoubtedly the most anxious problem of the present and the future in tropical medicine is that of sleeping sickness. For many years an obscure and happily not common disease, it has become either more patent or more diffused with the spread of commerce and civilization, bringing, as both of them do, a new and unaccustomed mobility to the native populations. For some years it has been known that this disease was endemic in certain lake-side districts, which were the sole and particular haunt of that species of tsetse fly known as *Glossina palpalis*. The habitat was fortunately not widely diffused, and was dependent upon the contiguity of more or less stagnant water. Drastic, costly, and successful methods were adopted for its eradication; the scrub and bush surrounding the Central and East African lakes was cut down or burnt; not only villages, but whole tribes were removed from the area of infection; the sufferers were segregated, and, if not cured (for that is as yet a rare and wonderful event), were at least prevented from becoming carriers to their fellows or to the fly. All seemed going well, with a hopeful promise of ultimate eradication, when Nature, as if irate at human control, dashed our hopes through the scientific discovery that *Glossina morsitans*, the most common and most pervasive of tsetse flies, was also a carrier of the infection, and many animals, both wild and domestic, have fallen under the almost proved suspicion of being life-hosts of the deadly trypanosome. The realization of this horrible development has given rise to a too previous demand that all the suspect species of mammals should be ruthlessly destroyed. But the time is not yet, for the proof is not sure. Let me at once protest that my hesitation is not in the interest of so-called big game; indeed, it is quite likely that the infection is equally conveyed by small vermin.

It is true that as a naturalist I should be very loth to exterminate a species which can never be restored. Within the memory of living man the Great Auk has ceased to exist, and, still more remarkable, within a decade the passenger pigeon, which used to cover the United States with a migratory cloud, has been wiped out so completely that only one caged and living specimen is believed to exist to-day. But at the same time I would hesitate at no destruction of wild fauna if and when I was convinced that this holocaust was essential to the elimination of disease. In order to be sure of the facts and to secure scientific guidance for future action, however drastic, I have sent to Nyasaland a Commission of highly trained and distinguished men under the direction and personal supervision of Sir David Bruce. I am receiving from them frequent reports; I am watching the almost daily development of their diagnosis, and I shall shrink from no action which may seem to be dictated by the data of ascertained facts. The Commission which the British South Africa Company has sent to Rhodesia is obtaining valuable results which will materially assist the Commissioners in Nyasaland. But many of the empiric cures suggested by those who are not on the spot appear on consideration to be as bad as the disease. To talk of the extermination of the wild fauna of a subcontinent is to talk wild nonsense. The suggestion is only possible from those who take their natural history and their geography from a school atlas. To give the natives power, permission, and material with which to drive back the game from the neighbourhood of their villages is both possible and desirable, but it carries with it in its train certain dangers. The game, if infected (and that is the only reason for their removal), will then carry with them the trypanosome to some now immune area, and if the natural incubator is removed the fly will be more inclined, and compelled to attack both man and his domestic animals. The Acting Principal Medical Officer of Nyasaland, in his report of last year, said:

> The fly has adapted itself to new conditions, and has learnt to make use of man as its ordinary food where game used to supply its needs.

And as a corollary he asks:

> Why this enormous increase in the numbers of fly in districts where game was plentiful but does not now exist?

It is begging the question to say that when game goes *morsitans* goes. That is the specific inquiry upon which the Commission is engaged. In my present belief civilization will best destroy *morsitans*, not by the removal of the wild game, but by the cultivation of the soil. Many additional precautions can be, and are being, taken pending the results of these inquiries, Some native villages are being moved, others are being amalgamated, because flies are more easily kept down in the *ceinture* of a large settlement. Fly-trapping also may usefully be adopted, as its success has been proved in German East Africa; but I would beg the Committee for a moment to believe with me that heroic measures founded on half knowledge are a mischievous form of human folly. With the establishment of civilization and administration inter-tribal communication increases beyond its ancient wont, and the risk of spreading sleeping sickness is enlarged; so, in the tropics at least, the institution of law and order is

not always a blessing in disguise. West Africa has enjoyed throughout its history an evil reputation in matters of health, but I have recently been able to lay before the House a return based upon statistics for the last nine years showing a most marked improvement in the hygienic conditions of that coast. In spite of outbreaks of plague, yellow fever, and other pestilences, the death-rate of European officials in those nine years has fallen from 21 to 13 per 1,000, and the invaliding-rate rate from 56 to 25 per 1,000. This gratifying improvement is progressive, and is doubtless due both to sanitary care and a more careful mode of life by those whose duties compel them to reside there.

Education and Research.

I cannot leave this matter without at least a few words on the subject of the study and pursuit of tropical medicine in this country. We owe a deep debt to the interest in this science of Mr. Joseph Chamberlain. It was largely due to his encouragement and activity that the Liverpool and London Schools of Tropical Medicine have reached their present status and efficiency. These schools render invaluable services to our colonies by the supply of competent and carefully trained students as recruits to our medical staff—of men who have had the opportunity of instruction in the specific diseases of the tropics, with which they will have to deal; and these schools also undertake a large amount of scientific research in tropical medicine, from the results of which we constantly profit. But the London School is much in want of further funds to extend its beneficent operations. I am glad to say we have recently secured a bequest by Lord Wandsworth of £10,000 for medical research, which has been allocated by Sir William Bennett to the provision of scholarships at the London School, but much more is needed, and I warmly commend this institution to the generosity of the public. During the last few years large sums have been spent in Uganda and Nyasaland in the investigation of tropical diseases there, and contributions have been made from Colonial funds to research work in connexion with Malta fever, liver abscess in Fiji, vomiting sickness in Jamaica, pellagra in the West Indies, and many other cognate matters. Permanent research laboratories have been established in the Federated Malay States, Ceylon, British Guiana, the Leeward Islands, and in Southern Nigeria.

In the Colonial Office itself, during the period of which I am speaking, much progress has been made towards a better knowledge and supervision of these subjects. I have now a permanent Committee to advise me on medical and sanitary matters connected with tropical Africa, containing such distinguished men as Sir Patrick Manson, Sir Ronald Ross, Sir James Fowler, Dr. Thomson (of the Local Government Board), and Professor Simpson.

There is also a Committee of Entomological Research, which was at first limited to tropical Africa, but I am now making arrangements by which the self-governing dominions, India, and the Crown Colonies generally, can avail themselves of its services. And last, but not least, there is the Sleeping Sickness Bureau, which I am about to expand into a bureau dealing with tropical diseases generally, whether of men or of animals. In relation to tropical medicine it is impossible not to record the great loss sustained in the recent death of Sir Rubert Boyce, who rendered great services to the West Indies and to West Africa, or to the impending loss we are to suffer in the retirement of Sir Patrick Manson, who has for many years been the guide, philosopher, and friend of the Colonial Office and the Colonial Service. I make no apology for having detained the Committee at this length on the important subject of medicine, even at the cost of some compression of other matters, which I am still anxious to touch upon.

National Insurance Act.

Tuberculosis Cases.

Mr. Guiney asked the Secretary to the Treasury what arrangements had been made for the examination of tuberculous persons in Ireland who would become contributors under the National Insurance Act on July 15th; what arrangements would be made, if any, with the governing bodies of existing sanatoriums as to payment for treatment of insured persons; and would chronic cases of tuberculosis be dealt with under the provisions of the National Insurance Act. Mr. Masterman answered that negotiations were in progress between the Local Government Board for Ireland and the Irish Insurance Commissioners on the one hand and local authorities and the governing bodies of voluntary organizations on the other, as recommended by the Astor Report. Insured persons suffering from tuberculosis would be qualified to receive sanatorium benefit if recommended by their Insurance Committee, whether the case was chronic or not.

Medical Instructions.

Mr. Wilkie asked the Chancellor of the Exchequer whether he was aware that, under the model rules approved by the National Insurance Commission, insured persons would have to comply with the instructions of the medical attendant as a condition of receiving sickness benefit; and whether, in the event of the doctor reporting that an insured person's illness had been occasioned by the condition of his mouth and teeth, and that he required dental treatment, any provision would be made for the insured person to have such dental treatment in the event of his being unable to afford it, and whether his sickness benefit would be stopped in consequence. Mr. Masterman said that instructions of the kind contemplated in the question would not fall within the meaning of the medical instructions which an insured person must obey as a condition of receiving his medical benefit; nor could a society insist upon an insured person providing any particular kind of treatment at his own expense as a condition of receiving benefits.

Sickness Benefit and the N.H. Leaflet.

Mr. Cassel asked whether the Government were prepared to make good the representation contained in the N.H. leaflet that sickness benefit would be paid to working men at 10s. a week for twenty-six weeks, commencing on the fourth day of sickness, and disablement benefit at 5s. a week afterwards if still incapable of work. Mr. Masterman said that the benefits mentioned were the ordinary benefits of the Act. They were paid first from the funds of the approved society and guaranteed by the National Insurance Fund, unless and until a valuation had disclosed a deficiency. These benefits were as stated in the N.H. leaflet, subject to certain waiting periods and other conditions. These conditions were explained in the official leaflets, of which a list was given on the last page of the N.H. leaflet, and of which supplies could be readily obtained from local Customs and Excise officers.

Mr. Cassel asked the Chancellor of the Exchequer if he would explain why, in the N.H. leaflet recently circulated, the benefits were specified without specifying the waiting periods and without any reference to arrears; and whether he would alter the leaflet so as to summarize the provisions as to waiting periods and arrears in the same manner as the provisions as to benefits, so as to prevent false hopes being raised. Mr. Masterman said that it was expressly stated in the N.H. leaflet that the benefits were "subject to certain waiting periods and other conditions." It was not practicable in a leaflet intended to be of a general character to give particulars of all the provisions of the Act affecting insured persons. Such a leaflet was necessarily of limited dimensions, and laid special emphasis upon what knowledge was immediately required. It would be very difficult to summarize in three or four lines the arrears provisions. It would include a full table of the various reductions which had to be made and the different sickness benefits which would then be given, and all the various conditions as to the amount of arrears the insured person was in.

Apportionment of Medical Fees.

Mr. Gretton asked how it was proposed to pay doctors under the National Insurance Act in cases of hotel staffs who moved in different seasons of the year from one hotel to another, and in cases of domestic servants who were in service in Scotland for six months and moved to England for six months in each year; would the doctor in the district where the employed person commenced the year receive the capitation fee for the whole year, or would the fee be apportioned between the doctors in the various

districts where the employed person might reside during the year; and, if the fee was to be apportioned, would any difference be made between the summer and winter seasons? Mr. Masterman replied that the Act gave full power subject to regulations to the Insurance Committees and medical profession in each district to make such detailed arrangements for dealing with matters of the kind referred to in the question as might be found most expedient and agreeable to all concerned. The Insurance Commissioners would facilitate such arrangements as might be necessary for such purposes between the committees of different districts. It was not to be assumed that doctors would necessarily be paid by capitation fee. If locally preferred a system of payment per attendance might be adopted. Regulations would be laid down, and they were now being discussed by the medical representatives on the Advisory Committee in conjunction with the Insurance Commissioners.

Hospital Attendants.

Mr. Butcher asked the Secretary to the Treasury whether attendants and employees on the staff of private hospitals for the care of the insane, who received from their employers full wages and medical care during illness, and who, if they were suffering from an infectious disease, were at the cost of their employers sent to a hospital for treatment, were compelled to become insured persons under the National Insurance Act; and, if so, whether there were any special approved societies which such attendants and employees could join in order to ensure that they got, under the Act or otherwise, benefits proportionate to the contributions made by them and their employers under the Act. Mr. Masterman replied that the attendants and employees in question were compulsorily insurable. If, however, a custom or practice was shown to the satisfaction of the Commissioners to exist in these particular institutions for the persons employed to receive full remuneration during sickness the Commissioners would make a special order reducing the rate of contribution payable by and in respect of these persons in accordance with the terms and conditions of Section 47 of the Act. If adequate provision was also guaranteed by their employers for sickness and for permanent disablement it might also be possible for such persons to come into some scheme for alternative benefits instead of sickness and disablement benefits under Section 13.

Medical and Sanatorium Benefit.

Last week Lord Heneage raised the question in the Lords and specially dwelt on the apparent inability of the Government to fulfil all its engagements under the Act. He specially drew attention to the published leaflets and asked when the Government would be in a position to guarantee the medical and sanatorium benefits promised. They could not be provided unless an agreement was come to with the medical profession, who seemed to get more irritated every day. Lord Liverpool, who replied for the Government, said that, as to medical benefit, the Government gave an absolute assurance of what was promised in the National Health Leaflet. A doctor would be provided, or in special circumstances a money payment made instead. Negotiations were going on with the doctors. They were of a perfectly friendly character. While they were still in progress it would be inexpedient to make any statement at the risk of prejudicing the result. The negotiations were not likely to be long, and the Government hoped that long before January 15th, when the medical benefits were to come into operation, they would have been successfully concluded. If, however, it should prove impossible to make arrangement with the doctors insured persons would receive an equivalent payment of money. If that sum were 6s. a year, which was the calculation upon which the scheme of the Act was based, each insured person for medical treatment per year would receive 2s. 8d. from his own contribution, 2s. from his employer, and 1s. 4d. from the State. For sanatorium benefit there would be no waiting period. There was no reason, however, to anticipate a sudden rush of insured persons in great numbers claiming treatment. Sanatorium benefit did not mean treatment in sanatoriums alone. It included treatment in hospitals, dispensaries, and through other forms of existing agencies; also treatment in the patients' homes. It was not suggested that institutions for treatment would be available by July 15th to the same extent as in the following year. It was obvious that the first step was to find out in what area of the country buildings were chiefly needed. It was not to be expected that institutions would be built at once, but by means of the 1½ millions provided they could be proceeded with as rapidly as those responsible could carry out the work. From July 15th onward a considerable number of insured persons would begin to receive through the assistance of the insurance fund treatment for tuberculosis which they could not otherwise have obtained.

Lord Lansdowne, the Lord Chancellor, and some others also spoke, and then the matter dropped.

Forcible Feeding was made part of the case against the Home Secretary on Friday in last week, when Lord Robert Cecil moved what was practically a vote of censure on Mr. McKenna. In the course of his speech he said that on the simple principle of equality it seemed impossible to justify the detention in the second division of prisoners who had acted under the orders of those three leaders. The result had been that the prisoners had refused food, and had been forcibly fed. He would not contend that in no circumstances was it right forcibly to feed prisoners. He admitted the immense difficulties in which the authorities were placed. It was possible and even probable that those who had to submit to forcible feeding exaggerated the pain and suffering caused by the operation, and were not always quite fair to those who were engaged in carrying it out; but there could be no doubt that the operation involved extreme discomfort, even when it was carried out with the good will of the person subjected to it, and might degenerate into what must be described as torture. He did not think it likely that any man or woman would be found to undergo the suffering which forcible feeding involved unless they had a very strong motive driving them to act as they did. That motive, he thought, was that they felt profoundly that it was a great injustice that they should not receive the same consideration as was shown towards their leaders. Mr. Keir Hardie took the same line, and said the Home Secretary had alleged on more than one occasion that forcible feeding in itself was not necessarily injurious to health. In refutation of this he read from a letter and memorial dated yesterday, sent by Sir Victor Horsley to the Home Secretary, and signed by 117 medical practitioners, strongly protesting against the forcible feeding to which certain prisoners were at present being subjected. They considered that feeding in cases where the operation was resisted by the patient was accompanied by immediate risk to life, in addition to the danger of permanent damage to health both of body and mind. The alternative to forcible feeding was to make them first-class misdemeanants. Mr. McKenna said it was not a pleasant task for any person to be responsible for carrying out the law at the present time when a number of prisoners declined to take their food in the ordinary way, with the result that the prison authorities were forced to the alternative of either feeding them forcibly or ejecting them from prison. He thought they were bound to take one of those courses, and, like his predecessors in office, he had had to come to the conclusion that the proper course for the Home Office to adopt in the public interest was to administer food forcibly to some of these ladies. He could assure the House that that was a conclusion to which he had come with the greatest reluctance. But the main point of the attack had not been concerned with the question of whether these prisoners should or should not be forcibly fed, but that the Home Secretary in the exercise of his office had advised His Majesty to substitute imprisonment in the first division for another division in the case of Mrs. Pankhurst, and Mr. and Mrs. Pethick Lawrence. It was said that the Home Secretary should at the same time have advised His Majesty to make the same substitution in the case of a whole class of offenders. After a long argument on this point Mr. McKenna dealt with many of the cases individually, and justified the action taken by the Home Office. The debate lasted the whole sitting, and on a division the Home Secretary was supported by a majority of 144, the numbers being 69 for the vote of censure and 213 against it.

England and Wales.

[*From our special correspondents.*]

SOUTH WALES AND MONMOUTHSHIRE.

Their Majesties at Cardiff.

The King and Queen, during their four days' stay at Cardiff, in addition to public functions, paid private visits to two hospitals. The chief object of the King's presence was the laying of the foundation stone of the Welsh National Museum in Cathays Park, and His Majesty promised that he would in due course revisit Cardiff to open the museum when completed.

The King and Queen on June 26th paid a short visit to the Royal Hamadryad Hospital, where the Superintendent, Fleet-Surgeon Whelan, conducted them over the building. On June 28th they visited King Edward VII Hospital, where they were received by the Chairman, General Lee, and the Chairman of the House Committee, Colonel Bruce Vaughan, and were accompanied in an inspection of the new wards by Dr. Herbert Vachell, Mr. Rhys Griffiths, the resident medical officer, and the matron. The King and Queen were much impressed with the beautiful lighting and decoration of these wards, the King remarking that they were far in advance of any that he had seen. He turned to Mr. W. James Thomas, through whose generosity much of the new block has been erected, and warmly complimented him on his valuable work. He also informed Colonel Vaughan that he had heard of the great amount of work that the Colonel has done on the hospital's behalf. Her Majesty was pleased to accept from Mr. Lynn Thomas, C.B., a gold badge of the Glamorgan Branch of the Red Cross Society, and, as Mr. Thomas pinned it to her dress, she promised to wear it as a souvenir of her visit. Many patients were questioned by Their Majesties, one tiny girl causing some amusement by walking up and saying, "How do you do, Queen?" Another small child would not believe that the King was present, in the absence of the crown. Enormous crowds cheered Their Majesties on their arrival and departure.

MANCHESTER.

The Warehousemen and Clerks' Association.

At a special general meeting of the members of the Manchester Warehousemen and Clerks' Provident Association held last week, the schemes advocated by the directors, which were rejected at the annual meeting in March, were presented in an amended form and adopted. One of the schemes is of interest to medical men, as it deals with members receiving a salary of over £160 a year and employed persons who for any reason cannot participate in the Insurance Act. At present all the members of the association receive medical attendance free from part-time medical officers appointed by the association; these number something like a hundred, and receive 4s. a year for each member on their list, each doctor having a district allotted to him. There have been frequent complaints that members in receipt of as much as £500 or even more a year have used the services of the club doctors, while the low-waged workmen in warehouses are definitely excluded from joining the association. It has been decided that the association shall seek to become an approved society under the Act, when those of its members who were eligible would receive medical attendance through the insurance in some way. For those not eligible for the national insurance, either because they are in receipt of over £160 a year or for any other reason, the present contract system for medical attendance is to be abolished, and they will be allowed to go to any doctor they like, the association paying for medical attendance and medicine any sum not exceeding 3s. 6d. a visit. Under the scheme no extra contribution is to be required from these members. A considerable amount of opposition to this scheme was raised in the meeting, one member complaining that it gave the well-to-do members a preference over the poorer members, inasmuch as the richer members could choose their own doctor, while, he continued, "we poorer ones have to go one behind the other and wait. I can see a poor member going to the appointed doctor at midnight to tell him 'My wife has got pneumonia,' and the doctor replying, 'All right, I'll come in the morning.' Doctors have had a bit of their own way in the past, but now it is time patients had theirs. Both are dependent upon one another, and the one cannot exist without the other." It is evident from these remarks that the members of the association lay great store on free choice of doctor, but it would seem that they think that those members who come under the Insurance Act will only be entitled to medical attendance from specially appointed doctors. The idea apparently is that the medical benefit scheme of the Act will not be worked by the doctors, and that the association will then appoint its own doctors to attend the insured members of the association, while the non-insured members will be free to choose their own doctor. The fact that the present contribution of the non-insured members is not to be raised, and yet fees up to 3s. 6d. per attendance are to be paid to any doctor chosen by these members, rather points to an idea in the minds of the directors that the cost to the association of medical attendance will not be more, or at any rate not appreciably more, than the 4s. a year per member which is the cost at present. The opposition to the scheme evidently arose from the fear that the cost would be considerably more, and that in consequence the whole association would suffer, including the insured members, who would not have the advantage thus accorded to the well-to-do non-insured members. The Chairman put the scheme to the vote amid great opposition, but it was declared to have been carried.

The St. Mary's Hospitals, Manchester.

The financial position of the St. Mary's Hospitals continues to give cause for some anxiety to the board of management, as is evident from the report presented to the annual meeting of subscribers held on June 25th, at which the Lord Mayor of Manchester presided. The new building was occupied in April, 1911, by the opening of the children's ward with twenty-five beds, and in July the gynaecological department was opened with accommodation for 85 cases. The Whitworth Street hospital has been reorganized, fifty beds being now used for maternity cases, and accommodation being provided for eleven medical students and twenty-eight midwifery pupils, and as this branch is conveniently situated the out-patient department is retained here, the High Street hospital being better suited for patients that need a longer stay. The number of patients treated during the year was 19,305, and the cost of maintaining the various branches amounted to £11,915, apart from the special expenditure of £3,588 for alterations and refurnishing at the Whitworth Street branch. The opening of the new hospital has caused an increase of £2,253 in upkeep. The total income for the year was £9,640, so that there was a deficit in the income and expenditure account of £2,275. The Women's Guild had been able to collect more than 200,000 pennies from the working classes, and the increase in subscriptions amounted to about £2,000, the total amount received in donations being £40,743. The total received from the patients was £537, which is, roughly, about 6d. from each patient. On the motion of the Lord Mayor, the report was adopted, and Bishop Welldon, in supporting it, said that no one wanted the hospitals to go on the rates, but unless they were better supported by private individuals there would be no alternative. The thanks of the meeting were voted to the board of management, the honorary medical staff, and the ladies' committee for their valuable services during the year, and also to the Lord Mayor for presiding at the meeting.

LONDON.

Proposed Conference on Sanatorium Benefit.

At a meeting of the Lambeth Borough Council on June 27th, a report was presented by the Public Health Committee with reference to the parliamentary grants for sanatoriums and tuberculosis dispensaries. A letter was read from the Hampstead Borough Council, stating that this authority was strongly of opinion that in London the provision of tuberculosis dispensaries should be undertaken by the borough councils either singly or in groups. The Holborn Borough Council, in a letter, suggested that a conference of the metropolitan borough councils should be called to discuss the whole question, as it would be of

advantage to secure uniformity of action. The Lambeth Borough Council decided to support the proposal to call a conference, and appointed delegates to attend.

METROPOLITAN CORONERS' DISTRICTS.

The London County Council, on October 11th, 1910 (BRITISH MEDICAL JOURNAL, vol. ii, p. 1180), presented a petition praying that the King would sanction (1) the transfer of the boroughs of Paddington and St. Marylebone from the central to the western coroner's district; (2) the transfer of the parish of St. Luke, Finsbury, from the north-eastern to the central coroner's district; and (3) the adjustment, where necessary, of the boundaries of the various coroners' districts so that they should coincide with the boundaries of the metropolitan boroughs. The Order in Council giving effect to these proposals having now been issued, the Council, on July 2nd, formally assigned the districts as altered as follows: Eastern district, Mr. Wynne Edwin Baxter; north-eastern, Dr. W. Wynn Westcott; central, Mr. Walter Schröder; western, Mr. C. Luxmoore Drew; southern, Mr. George Perceval Wyatt; south-western, Mr. Samuel Ingleby Oddie; south-eastern, Mr. H. R. Oswald. Mr. S. Ingleby Oddie and Mr. C. Luxmoore Drew have appointed Dr. R. Henslowe Wellington and Mr. Arthur D. Cowburn, respectively, as their deputies.

Ireland.

[FROM OUR SPECIAL CORRESPONDENTS.]

CONSUMPTION SANATORIUM.

THE Women's National Health Association has acquired the house and estate of Peamount, for the purpose of a sanatorium for tuberculous patients. Acting on behalf of and by request of, such county councils as have already applied, or shall hereafter apply, for their assistance in the matter, pending the time when the county councils are able to take over the work, the association will provide accommodation for persons entitled to sanatorium benefit under the Insurance Act. A grant has been authorized by the Local Government Board for this purpose, with the approval of the Treasury and the concurrence of the Irish National Health Insurance Commissioners. The site is on a slight hill, with the ground sloping in all directions from the house. Though only about eleven miles from Dublin, and about two miles from Lucan station on the Great Southern and Western Railway, yet it is well isolated. The agricultural and farming operations on the estate will give facilities for what is now recognized as part of the remedial treatment for consumption. The existing house is to be used as an administrative building, patients being accommodated in suitable structures which will be erected in close proximity to it as speedily as possible.

MILK SUPPLY OF BELFAST.

The Local Government Board Inspectors, Mr. F. J. MacCarthy and Dr. Brian O'Brien, held an inquiry at the City Hall, Belfast, on June 25th and following days, in reference to the application of the Corporation for an order giving powers to inspect dairies situate outside Belfast County Borough from which milk is supplied to the city. The Corporation suggested that the order should apply to some eighteen rural districts. The application was made under the 19th Section of the Tuberculosis Prevention (Ireland) Act, 1908. The town solicitor said that the daily milk supply to Belfast was about 18,000 gallons, of which 12,000 gallons came from outside dairies; there was evidence that some epidemics were due to this outside milk, and that no serious attempt had been made to carry out the provisions of the Dairies, Cowsheds, and Milkshops Order. It was proposed, if the order was obtained, to warn the inhabitants of the source of their milk supply, and to make representations to the various rural district councils.

Councillor Dr. R. Thomson, J.P., Chairman of the Public Health Committee since May, 1910, said that in 1907 the committee had given instructions to the inspectors to visit and examine cowsheds and dairies in the country sending milk to Belfast; many of the reports received showed that the various arrangements were not sanitary. Objections were raised to these inspections, and in 1909, in consequence of the reports regarding the insanitary condition of two outside district dairies and of the presence of typhoid in these districts, and the outbreak of typhoid fever in the Springfield Road district of Belfast supplied by these dairies, it was resolved to apply for an order under the Act, but owing to the representations of a Local Government Board inspector that the time was inopportune, action was postponed. In 1911 a deputation was sent to the Local Government Board to explain the position. All the committee desired was from time to time to obtain information as to the purity of the milk supply to the city, and the conditions under which it was supplied.

Professor Symmers, Queen's University, was examined as to the samples of milk sent to him for examination.

Dr. Bailie, Medical Superintendent Officer of Health for Belfast, gave evidence of the condition of numerous cowsheds and dairies that he had inspected; for two years he had had considerable difficulty with town dairies, but now they were in a much better condition. He had no doubt that the power of inspection would eventually bring about an improvement in the country dairies.

The inquiry was not concluded.

Scotland.

[FROM OUR SPECIAL CORRESPONDENTS.]

GLASGOW OBSTETRICAL AND GYNAECOLOGICAL SOCIETY.

ON Friday, June 28th, Professor Whitridge Williams, of Baltimore, delivered an address as Honorary President of the society. Taking as his subject the pernicious vomiting of pregnancy, he grouped the cases into two categories, neurotic and toxaemic, the group of reflex cases, formerly separated, now falling into the first category. The cases could be distinguished by the urinary nitrogen analysis, the percentage of ammonia remaining normal under 5 per cent. in the neurotic group, and rising in the toxaemic cases to 15, 20, or even 40 per cent. The neurotic cases could be absolutely cured by suggestion, the patient being told with confidence that she would get well, and that she need not vomit unless she cared to. The high ammonia-rate in the toxaemic cases might be complicated by the effects of starvation or of acidosis, and the latter made chloroform a dangerous anaesthetic in these cases. The treatment in the toxaemic cases included saline infusion and, if need be, operative termination of the pregnancy. In the evening the members dined together under the presidency of Dr. A. W. Russell. The main toasts were proposed by the President, Sir George T. Beatson, and Dr. T. K. Monro.

CALEDONIAN MEDICAL SOCIETY.

The thirty-second annual meeting of the Caledonian Medical Society was held at Stonehaven on June 22nd. This society meets alternately in Scotland and England, and this year Stonehaven was chosen as the meeting place, owing to the present head of the society being Dr. W. A. Macnaughton, Medical Officer of Health for Kincardineshire, who has had the unique distinction of occupying the presidential chair twice—the last time twenty years ago. The subject of the president's address was "The Life and Correspondence of Mr. James Grant, Factor of Pitarrow," who combined the businesses of a factor and a smuggler in the picturesque times of the '45. Dr. M. Cameron Blair, Northern Nigeria, was elected president for next year, when the annual meeting is to be held in London. A presentation was made to Dr. Macnaughton by the older members of the society of a fur motor coat and some works of Celtic literature, in recognition of the valuable work he has done for the society since its inception. In the evening the annual dinner was held in the Bay Hotel, when the chair was occupied by Dr. W. A. Macnaughton. Including guests, there were forty present, and among those who proposed or responded to toasts were Emeritus Professor J. G. McKendrick, Provost of Stonehaven; Professor Matthew Hay, Aberdeen; Rev. J. B. Burnett, Stonehaven; Dr. Miller, Fort William; Dr. Waters, Hull; Dr. Gilles, London; Dr. Rorie, Cults; Dr. Greenlees, London, and others.

COMPULSORY NOTIFICATION OF PULMONARY CONSUMPTION.

Regulations have been issued by the Local Government Board providing for the compulsory notification, as from

August 1st next, of cases of pulmonary tuberculosis in Scotland. Since the issue of its first circular on this subject on March 10th, 1906, the Board has been gratified by the action taken by so many local authorities in extending the provisions of the Infectious Disease (Notification) Act, 1889, to this disease. The experience gained in this way has proved that the difficulties anticipated in connexion with the notification of pulmonary tuberculosis do not occur in actual practice. It is now recognized that as an indispensable preliminary to effective and complete preventive measures against the disease, local authorities should have accurate information of the cases existing within their districts. The Board is accordingly satisfied that the time has come when the notification of the disease should be compulsory throughout Scotland.

The regulations made by the Board in the exercise of its powers under the Public Health (Scotland) Act, 1897, provide that every medical practitioner attending on or called in to visit any person shall, within forty-eight hours after first becoming aware that such person is suffering from pulmonary tuberculosis, notify the case to the medical officer of health of the district in which the person is residing, and that every medical practitioner who is a school medical officer shall within the same period notify cases of children whom he has examined by virtue of his appointment to the medical officer of health of the district in which the school is situated. Such notification is not required in the case of any person suffering from pulmonary tuberculosis who is receiving treatment as an in-patient in a sanatorium, or other hospital or institution in which special provision is made for such treatment. Further, a medical practitioner or school medical officer is not required to notify any case of pulmonary tuberculosis which has already, to his knowledge, been notified. The local authority of the district within which the patient is residing must pay the medical practitioner two shillings and sixpence in respect of each notification, but in the case of the school medical officer no fee is payable.

Nothing in the regulations shall have effect so as to require a notification to be transmitted to a medical officer of health in respect of any building, ship, vessel, boat, tent, van, shed, or similar structure belonging to His Majesty the King.

Under Article III (2) a school medical officer is required to notify all cases of pulmonary tuberculosis occurring among children inspected by him. In many cases it will be practicable for the medical officer of health to acquaint the school medical officer with the names of children coming from houses in which cases of pulmonary phthisis have been notified.

Correspondence.

APPENDICITIS—AND QUICKNESS.

Sir,—In his first letter Sir George Beatson, writing on "the question of early operation in every case of acute appendicitis," told us that if the operation were done "within twelve hours of the onset of the attack he had no fault to find with that line of action," but in his second letter he says such "line of action" is "unwise." In his next letter he will tell us that it is unwise to operate at any time during the attack, and that all cases must wait—that is, if they live to wait—until an interval operation is performed.

In my last letter I pointed out how impossible it is to tell what is the condition of the appendix in any acute attack—how dangerous its condition may be—and therefore that it is always safer to remove it at once. Mr. Paterson, Mr. Childe, and Dr. Hobhouse all point out the same very important fact in their letters. But I did not for a moment imagine that any surgeon deliberately intended to leave an appendix abscess, without dealing with it by operation, in the expectation that in time he would be able with greater safety to do so, because he considered the pus would thus become much less virulent, and this is the reason given by Sir George Beatson for not operating early in the lecture to which he refers. The risks of such an abscess in the early stage are considerable. All of us who have had much experience have seen lives lost from such abscesses bursting into the peritoneal cavity, and other lives lost from pylephlebitis associated with them, and deaths from septicaemia, with perhaps extensive erosion of the tissues of the iliac fossa and loin, due to the digestive character of the pus, which remained intensely virulent, and fatal cases of mechanical obstruction, due to kinking of coils of small intestine forming the abscess wall. Mr. Makins, in *Burghard's Manual of Operative Surgery*, refers to 59 appendix abscesses, and in connexion with which in no less than 22 cases serious complications were present. In 5 intestinal obstruction, in 6 faecal fistula, in 2 spontaneous opening into the bladder, in 1 into the ureter, in 3 subdiaphragmatic abscess, in 3 empyema, in 1 cerebral abscess, and in 1 pulmonary abscess; 7, or 13.4 per cent., died.

And even if no disaster occurs before the abscess has reached a large size and has approached the anterior abdominal wall, so that the surgeon can cut straight into it without entering the peritoneal cavity—a condition which Sir George Beatson seems to consider desirable (See Lecture, *Lancet*, May 11th, 1912)—we may in opening such an abscess rupture it into the peritoneal cavity, and cause the death of the patient. This has once happened to me, and Murphy of Chicago records two cases under his care. In my own case I had done my best to persuade the patient to allow me to operate at an earlier date, but he would not consent. If now I have to deal with such an advanced abscess I first open the peritoneal cavity and pack it off before I cut into the abscess sac, to make quite sure no leakage occurs into the peritoneum. A few months ago I found pus leaking into the peritoneum from a large appendix abscess as soon as I opened the peritoneal cavity.

I should like to ask Sir George Beatson what evidence he has that pus shut up in an appendix abscess becomes so much less virulent, and that the subsidence of pyrexia and raised pulse-rate and leucocytosis, as he explains in his lecture, indicate this? We all know that in some cases the temperature may drop to normal, and pulse-rate may never have been much raised, and yet when an obvious swelling forms, and is operated on within a few days of the onset of the disease, a considerable collection of pus may be found; are we to imagine that at this early period the pus has lost its virulence? We must also recognize that leucocytosis is not present in every case of even localized suppuration, and therefore that because a leucocytosis persists up to a certain date in the attack, its disappearance is not proof that the pus has become less virulent. Does Sir George Beatson think there is reason to conclude that when leucocytosis ceases no further pus is formed in these cases? I should consider that was very doubtful. We do not yet know why in some cases of localized suppuration there is no leucocytosis, and therefore we are not able to say that it may not disappear also in a certain number of cases, even though the quantity of pus is still increasing, and the pus is still virulent.

It seems to me, then, that in many cases pus which has been walled-in for some time may be very virulent indeed, and as capable of doing harm if it gets into the general peritoneal cavity as it would be if the abscess had been dealt with at an earlier—and, to my mind, safer—period; but, as I said in my first letter, it is very rare to infect the general peritoneal cavity in evacuating an appendix abscess when we operate before the abscess is very large with all the special precautions we take, and in operating on more than 100 cases of appendix abscess I have only twice had evidence that such infection did occur. In one of these it was no more than might lead to protective adhesions in the track of the drainage tube, and in the other very little more, and not enough to be the cause of death. I have several times when operating in acute appendicitis found collections of pus around the appendix which were not walled in at all, but simply confined by the pressure of surrounding coils of distended intestine, and it seems hardly possible to imagine a greater danger than leaving such a collection without operation.

I have not recently come to the conclusion that the safe and wise course is to operate at once on all cases of acute appendicitis, for I have advocated this for the last sixteen years or more, and I discussed the matter very fully in a paper published in the *Bristol Medico-Chirurgical Journal* in 1905. I am sure we all must congratulate Sir George Beatson on his small mortality (even though, as Mr. Paterson estimates, it is about 55 per cent. in the acute

cases), but I think it must be mere fortunate coincidence if he generally leaves the abscess cases for late operation, for in the 59 cases referred to by Mr. Makins, no less than 7 died from complications of such abscesses. I cannot believe that abstinence from operation in an early stage of appendix abscess will give such a small mortality as Sir George Beatson has had in his acute cases, and I cannot help feeling there must be some other factor which has led to his success, which I do not understand, and which perhaps he has not himself correctly estimated, which may account for it.—I am etc.,

Bristol, June 23rd. CHARLES A. MORTON.

FRECKLING AND VISION.

SIR,—With a view to avoiding freckling, I think it would be worth while trying the effect of protecting the eyes by means of coloured glasses or goggles, apart from the protection of the skin from direct and reflected rays. This idea has been suggested to me by the recent work on vision and coloration by Sumner in the States and by a paper of Loeb's on the mechanism of vision, which have been summarized by Dr. Georges Bohn.[1] As far as the mechanism of vision is concerned, Bohn states that images of external objects are formed, not only on the retina, but also on an area of the surface of the cerebrum—the *area striata*. Further, it would appear—in fish, at any rate—that the cerebral visual images are conveyed to the skin. Sumner has been able to reproduce fairly complicated designs on the skin of fishes—the turbot, for instance—by mapping them out on the floor of an aquarium. A black and white chessboard design has thus been reproduced on the skin of a turbot. The reproduction in the fish is not strictly geometrical, but it has been found that the smaller the squares the more accurately is the design reproduced. In the same way circles, and parallel and cross-hatched black and white lines have been reproduced. Results are obtained with black, white, brown, and greys, but not with red and yellow. When the fish is blinded a reproduction of the designs cannot be obtained.

Loeb admits the conveyance of an image in the first place to the brain and thence to the skin. He maps out the path of this transference, for if the optic fibres connecting the retina with the brain and sympathetic fibres from the brain to the skin and pigment cells are divided, nothing happens. The foregoing I am taking from Dr. Bohn's account. But I would point out that *a priori* there is nothing startling in the occurrence of such transference of images when it is borne in mind that the skin and the nervous system are intimately connected and are indeed developed from the same embryonic layer. I have on many occasions insisted on this intimate connexion, but it is not my intention to go into various details of great interest on this point. I want merely to call attention to the possibility of the prevention of freckling, to some extent at least, by the use of coloured goggles. Perhaps if one could cut off some of the actinic rays in this way a result might be obtained. It would not be practical to wear such deeply coloured glasses as those used for ultra-violet and Finsen-light work.

The above ideas may, perhaps, account for some cases of freckling in which the pigmentation is not limited to the exposed parts of the body, but also affects covered and protected parts—that is, by the action of actinic rays on the retinae setting up disturbances in the pigment cells of the skin.

Other factors are no doubt at work. Things are usually not so simple as they appear to be, and Remy de Gourmont put it very well when he said that "Pour expliquer un brin de paille il faudrait démonter l'univers."

Again, coloured glasses might be of use in that rare condition, xeroderma pigmentosum.—I am, etc.,

London, W., June 19th. GEORGE PERNET, M.D.

ARTERIO-SCLEROSIS IN RELATION TO BLOOD PRESSURE.

SIR,—In the BRITISH MEDICAL JOURNAL for June 15th, Dr. R. Thorne Thorne mentions a case in regard to which he makes the somewhat bold statement that it "conclusively proves that the mercury manometer does give a true reading of the arterial blood pressure, quite apart from any local thickening of the brachial artery."

[1] *Mercure de France*, June 1st, 1912, p. 608.

In reality the case which Dr. Thorne cites proves nothing of the kind, and would be actually hard to reconcile with the theory (which, by the way, I disproved in a paper read before the Royal Society of Medicine three years ago) that the mercury manometer (by the method of circular compression) gives a true reading of arterial blood pressure, and is unaffected by the resistance of the arterial wall at the site of compression.

The high reading of 220 mm. in Dr. Thorne's case was probably not solely or even chiefly due to blood pressure, but was the resultant of blood pressure *plus* resistance of the arterial wall, the latter being due to spasm of the muscular coat; and the marked fall of the reading to 120 mm. resulting from Dr. Thorne's therapeutic measures was caused in great part by the relaxation of the spasm and the coincident diminution in resistance of the arterial wall, whereas the actual change of arterial blood pressure was but a small part of the difference between the two readings.

I have notes before me of the case of a man with marked atheroma of superficial arteries in whom I took simultaneous arm and leg readings (both limbs being at the level of the heart). On one occasion the arm reading was 179 and the leg one 176 mm., so that the two were practically identical; whereas a few minutes later the arm reading was 170 and the leg one 219 mm., a difference of 49 mm. If Dr. Thorne had taken successive leg readings in this case he would doubtless have arrived at the erroneous conclusion that there was a rise of pressure of upwards of 40 mm., whereas my results can only be explained by assuming an increased resistance due to arterial spasm of the wall of the leg artery.

That arteries, such as the radial, do vary in size as the result of treatment I have more than once directly observed. I have treated cases, in which the radials have been tightly contracted up, by potassium iodide or guipsine, and have noticed after some days' treatment a distinct softening and increase in size of the artery.

I am unable to agree with Dr. Thorne when he states "if a local arterial thickening will affect the reading of the pressure as given by the mercury manometer, then the latter instrument becomes practically useless to the clinician." Although the manometer reading is influenced by the two factors to which I have alluded, yet its use combined with the examination of the pulse by the trained finger (a method too apt to be neglected in these days of instrumental diagnosis) gives information of real value.—I am, etc.,

London, W., June 20th. OLIVER K. WILLIAMSON.

TINCTURE OF DIGITALIS—ITS POTENCY.

SIR,—In common with Dr. Frederick W. Price, I am astonished that Dr. Alexander Goodall should have found such variation in the potency of tinctures made by chemists of repute. Ten years ago one might have expected to find great variations, but within the past five years so much care has been taken in the preparation of tinctures of the digitalis group that my experience coincides with that of Dr. Price, and I am sure that the variation in potency in tinctures made in the Leeds area by good pharmacists does not exceed 10 per cent. Dr. Goodall tells us that of twenty-three tinctures examined by him in the three years ending December, 1911, only twelve were up to the average, while six were under, and, instead of a maximum dose of 15 minims, 18, 20, 22½, 22½, 22½, and 25 minims would be necessary. Five were over average, and the maximum dose would need to be reduced to 4, 7½, 8, 9, and 10 minims respectively.

One would like to know what Dr. Goodall regards as the end point in his experiments on frogs. Must the frogs be quite limp, the peripheral circulation stopped, and all three heart chambers still within the four hours with the 3 minim dose for the 20 gram frog? I ask this because one may find a frog active or with the circulation in the web active, and yet the ventricle is still in systole when the chest is opened.

I am in agreement when he says a standard preparation of tincture of digitalis remains active for twelve months, but cannot be relied upon for a longer period. This I have proved both clinically and experimentally on frogs.—I am, etc.,

Leeds, June 29th. J. GORDON SHARP.

THE PROBLEMS OF ASTHMA.

SIR,—In the review entitled, "The Problems of Asthma" (BRITISH MEDICAL JOURNAL, April 27th) it is stated that the pathology of the disease as I had traced it appeared altogether inadequate to explain the attacks described by Brügelmann. On referring to Dr. Brügelmann's treatise (fifth edition, 1910) I found that he described cases which he attributed to a "spasm of the pharyngeal tonsil" (page 13), whatever that may be; and as I had started by defining those on which I commented, it is manifestly unfair to tax me with failure of accounting for a process of which I did not treat at all. I may add that the majority of the patients who came under my notice had previously undergone surgical operations upon the nose or the throat, and had at the time no longer any pharyngeal tonsils.—I am, etc.,

London, W., June 27th. J. B. BERKART.

FORCIBLE FEEDING.

SIR,—I agree with the writers of the letter in the BRITISH MEDICAL JOURNAL of June 29th (p. 1516): "It is time that the medical profession, in its corporate capacity, made a protest against the forcible feeding of suffragist and other prisoners." The point at issue between the Home Secretary and the suffrage prisoners concerns their status. They demand recognition as "political offenders." Mr. McKenna persists in treating them as common criminals, although he has admitted the principle underlying their demand by giving first division treatment to the suffrage leaders. The women have refused their consent to imprisonment under degrading conditions, and have adopted the "hunger strike." The reason they do not take their food is political, not pathological, and the appropriate treatment is statesmanship, not a stomach tube. The dilemma of the Home Secretary affords no reason why medical practitioners should depart from accepted rules of conduct and perform unnecessary operations under dangerous conditions. The Home Secretary has ordered forcible feeding. He has instructed medical men to perform operations on patients who resist on principle.

Does the profession accept this position in relation to the Home Secretary? Is it justifiable to perform an operation, however slight, for any reason except the surgical need of the patient?

Your correspondents say: "To us the duty of the gaol surgeon seems clear—to allow the patient to go without food, and in the event of serious symptoms arising to acquaint the superior authorities of the fact."

If the Home Secretary wishes to punish troublesome prisoners, let him find other agents than members of the medical profession. It is misleading to describe as "medical treatment" an operation, surgically unnecessary, performed by physical violence on a resisting patient. Even if the operation were free from risk it would, under such circumstances, be indefensible from a medical standpoint and an outrage from a human one, but artificial feeding under the most favourable circumstances is not devoid of danger when continued for any length of time, and under prison conditions the risk is greatly increased. Abrasions of the mucous membrane occur; the avoidance of septic infection must be difficult or impossible, owing to the struggle, the absence of skilled assistance and hospital equipment, while the passage of food into the lungs or heart failure may cause the death of a patient who is held by force and who resists to the utmost of her power. Sequelae include permanent digestive disturbance from chronic dilatation of the stomach and interference with its secretory and motor functions. Forcible feeding of sane people who resist on principle is altogether different from artificial feeding in hospital or asylum practice, where the patient is either willing to co-operate with the surgeon or, usually, unconscious.

The position of the prison doctors is admittedly difficult. They are Government officials, and they are also members of a profession whose status depends on its maintaining moral independence and on the fact that scientific considerations alone direct treatment.—I am, etc.,

L. GARRETT ANDERSON, M.D., B.S.Lond.

London, W., July 2nd.

Public Health AND POOR LAW MEDICAL SERVICES.

POOR LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

THE annual general meeting of this association took place at the Council House, Bristol, on June 25th. Surgeon-General Evatt, C.B., was in the chair.

Council's Report: Election of Officers.

The report of the council for the last year, which had been sent to every member through the *Poor Law Medical Officer*, was received and adopted, and likewise the balance sheet, after a few criticisms from Dr. Holder and an explanation of the increased expenditure by the president, and the treasurer, Dr. Napper.

The following officers and council were unanimously elected for 1912–13:

President, Surgeon-General Evatt, C.B.; *Chairman of Council*, Mr. D. B. Balding, F.R.C.S., J.P.; *Treasurer*, Dr. A. Napper; *Honorary Secretary*, Dr. Major Greenwood; *Auditor*, Dr. A. Withers Green. *Council*, Dr. T. Lloyd Brown, Dr. W. Holder, J.P.; Dr. George Jackson, J.P. (Plymouth); Dr. T. Carey Barlow (London); Dr. J. B. Gidley-Moore (Ongar), Dr. A. Withers Green, Dr. W. Brown, Dr. C. Biddle (Merthyr Tydfil), Dr. A. Drury (Halifax), and Dr. C. Thackray Parsons (Fulham).

Poor Law Medical Service as Affected by the National Insurance Act.

Mr. J. J. Simpson, Clerk to the Bristol Board of Guardians, who read a paper on this subject, said that he had been thirty-seven years engaged in Poor Law work, and for thirty-five years had been actively connected with matters relating to the organization of Poor Law officers. The Poor Law medical and general service had hitherto been responsible for the care and maintenance and, in a large number of cases, the treatment and training of some 895,000 poor in England and Wales. Of these roughly 300,000 were in workhouses, infirmaries, homes, and other institutions, 95,000 were lunatics in asylums, and 500,000 were out-door poor who received aid in their own homes. Dividing these in another way, the total number of ordinary adults would be 540,000, children 260,000, and lunatics 95,000. Only a small proportion of women would be assisted in any way by the Insurance Act, and very few of the children, and those only indirectly where they were chargeable because of their parents' illness. Besides the aged and permanently afflicted classes and widows and deserted women and their children, practically all that remained were the unemployed and unemployable, who would not in any way participate in the undoubted benefits which the Act would provide for the artisan and all classes of workers. It might be that in process of time a number of aged men and women might be provided for under the disablement clauses of the Act, but it was quite obvious that none of these now receiving relief or requiring relief within the next few years could secure any of the benefits provided under the Act. There were many things that might interfere with the full enjoyment of the benefit or with its adequacy in preventing need for Poor Law assistance. To begin with, there must be an absolute incapacity for work. If the disabled person was not able to take care of himself and had no friends who would look after him, and in consequence had to enter a workhouse or infirmary or other institution, the payment ceased, except in a few cases. In no case could the guardians obtain any payment. Further, if the disabled person received 5s. a week, was married, and his wife was not able to maintain herself, or if there were children dependent, it would certainly be necessary to resort to the Poor Law for assistance, and should out relief be given the Act provided that benefit up to 5s. weekly was not to be taken into account by the guardians in fixing the relief. The man and wife and family would therefore have to be granted nearly as much relief as at present. The number of aged men relieved, now some 155,000, might in process of time be somewhat reduced. In the case of married couples, where the man had been an employed contributor, he alone was entitled to medical treatment, etc. Probably a fair proportion of the sick men and women, who numbered 50,000, relieved both in the infirmaries and workhouses, and in their own homes (about 31,000 men and 19,000 women) would be under the Insurance Act in future, and would therefore come off the Poor Law. Men who could be treated in their own

homes, and who were of the regularly-employed class, should not need much Poor Law assistance, unless their families were very large, as the men would be entitled to medical attendance and medicines and the sick benefit of 10s. a week for twenty-six weeks. This class would not be all covered, because where the sickness was severe, or where much attention and care were required, it would be impossible to procure this at home, and the medical practitioner required to deal with the case and supply medical treatment could not be expected to act as medical attendant and nurse, and in many cases removal to the hospital or infirmary would be essential. Arrears would prevent some portion of all classes from receiving the benefits specified in the Act, and they would continue to be provided by the Poor Law. The able-bodied and healthy men and women, numbering some 30,000, were nearly all of the casually employed class, and like the 10,000 tramps, would not derive benefit. The remaining classes were the widows and their families, deserted women and families, women whose husbands were at sea, or in hospitals, asylums, or prisons, and orphan children, and single women with illegitimate children. The total number of these various classes was some 50,000 in workhouses or other institutions, and about 150,000 receiving out relief, or boarding-out allowances, and a small proportion only would be entitled to the medical, or sickness, or disablement benefits. In the case of sanatorium benefit the number to be helped would not be a large proportion of the Poor Law cases; all help of this kind was to be given apart from Poor Law institutions. As to sick benefit and disablement benefit, it was doubtful if much appreciable diminution would be apparent in the burden of the Poor Law. The maternity benefit should undoubtedly reduce the demands on the guardians. In conclusion it might be noted that the freedom of choice given to each insured person as regards the medical practitioner to attend might have some influence and in time affect Poor Law methods.

Difficulties in the Practice of the Poor Law Medical Officer.

Dr. C. E. S. Flemming (Bradford-on-Avon), in a paper on this subject, drew attention to the various unfavourable conditions under which most Poor Law medical officers were required to work. The method of payment was unsatisfactory, as it did not even bear that ratio to possible attendance that capitation payment did. The amount of payment was also notoriously insufficient. In regard to drugs, the salary of the Poor Law medical officer restricted the use of expensive ones. As to stimulants and food, it was sometimes difficult to procure more than just sufficient to satisfy the consciences of the guardians, but not the needs of Nature. In that direction there might well be considerable improvement. More assistance and skilled nursing were wanted in the treatment of the sick and infirm. Better surroundings for the patients were needed—comfort, cleanliness, warmth, air, and sunshine. There should be some authority to see that these things were provided. Prevention was better than cure, but where prevention had been neglected the State should give the best attention to the poor whose health gave way.

A discussion then took place on both papers.

Dr. Major Greenwood said that they were all much indebted to Mr. Simpson for his able and instructive paper. It was evidently Mr. Simpson's opinion that very little immediate change in the Poor Law Service would be brought about by the Act. This would be lessened if, as was very likely, the medical benefit was abolished. Dr. Flemming had given a very interesting account of much with which every Poor Law medical officer was only too familiar. He agreed with him as to the inefficacy of much of the drug treatment in Poor Law medical practice, and considered one of the greatest defects of the Insurance Act was that it tended to multiply outside the Poor Law much of the drug treatment Dr. Flemming condemned. Care was necessary, as all Poor Law administrators knew well, that Poor Law relief should not be given too freely and too easily.

Dr. Parkinson (Wimborne) spoke of the value of a knowledge of the conditions of the district and place, where applicants for relief resided. Bad housing was complained of, but bad habits of the people were worse.

Dr. Holder (Hull) urged that medical men should go on councils and boards of guardians, the lay members of which were anxious to accept and act on their advice. He thought it possible that the Insurance Act would lessen the number of cases. It would reform the poverty of the nation, and compel those that received benefits partly to pay for them. The contributions of the State would prevent among the poor things going to the pawnshop, and homes being thereby impoverished. The Act must insure the reorganization of the payment of Poor Law medical officers. It would relieve them of some of their work; it saved them from attendance on tuberculosis cases, and would allow a fair amount of time to be given to diagnosis.

On the Necessity of Union among all Medical Officers holding Part-time Appointments.

Dr. Parkinson, in opening a discussion on the subject, said that it was absolutely necessary that general practitioners holding all sorts of appointments should combine to protect themselves from the assault made upon them. There was a danger of part-time men being altogether superseded by whole-time men. He suggested that the several sectional associations of medical men should join together and appoint a committee to decide upon joint action to protect their interests when any section was assailed.

Dr. Major Greenwood said that the tendency to which Dr. Parkinson had drawn attention was detrimental to all general practitioners, and was often bad for the public. The part-time offices enabled practitioners to make a living in districts where otherwise the sparsely scattered population would have no doctor. He moved:

> That this meeting of the Poor Law Medical Officers' Association of England and Wales is in favour of a closer union between all associations of part-time medical officers, and instructs the Council to do all in its power to favour that union.

Dr. Balding (Royston), who seconded, said that good results would certainly attend such a project as that suggested by Dr. Parkinson.

Dr. Macartney (Cinderford) objected to multiplying associations. They had the British Medical Association, which ought to be enough for all they desired.

Dr. Holder pointed out that that no new association was contemplated.

Dr. Major Greenwood, in emphasizing that point, said that no one had more respect for the British Medical Association than he, but it did not understand the interests of part-time men. A union of all part-time medical officers would act as a watch dog on that Association.

Dr. Napper (Cranleigh) strongly supported the proposal.

The resolution was carried almost unanimously.

The proceedings closed with a vote of thanks to the Chairman, and Dr. W. Brown, for the admirable way he had organized the meeting.

Civic Welcome.

The members present were then entertained to tea by the Lord Mayor, who expressed his satisfaction in welcoming the association at Bristol, and his sympathy with their work under so many difficulties.

Dr. Balding and Dr. Skelton briefly acknowledged the courtesy shown by the Lord Mayor.

Annual Dinner.

The annual dinner took place at the Royal Hotel, Bristol, at 7.30 p.m. Among the guests were Mr. H. T. Bolt, President of the Bristol Chamber of Commerce; Alderman G. Pearson, Mr. Holms Gore, Clerk to the Justice; Mr. J. T. Francombe, Chairman of the Bristol Board of Guardians; Mr. Byrt, Vice-Chairman; Mr. J. J. Simpson, Clerk to the Bristol Guardians; Mr. J. A. Coles, Assistant Clerk; and Mr. Seymour Williams, Clerk to the Walmley Guardians.

After the royal toast, Mr. Francombe proposed that of "The Poor Law Medical Officers' Association." He said that Bristol had been specially honoured that week; that morning it had received a visit from the Poor Law chaplains, and now was honoured by the Poor Law medical officers. He did not know which were the better, but did know which were the most carefully listened to. What the doctor said was law in the house. While the medical profession was highly appreciated, nobody appreciated it at its full value.

Dr. Major Greenwood, in responding, said that he desired to express their thanks for the reception given them by the Lord Mayor, and to the Bristol Corporation for allowing them the use of their Council House. The present was a most critical time for the profession, and difficulties had arisen with the Insurance Commissioners which did not seem likely to be surmounted. One great object of their meeting in provincial centres was to rouse their somewhat lethargic brethren there. Self-help was the best help. If they wanted help from the Association, they must help the Association by joining it. The British Medical Association justly claimed that it had within its ranks more than one-half the practitioners of Great

Britain. He was living in hope that a day might come when the Poor Law Medical Officers' Association would embrace more than one-half the Poor Law medical officers in England and Wales.

The toast of "The City and Corporation of Bristol," proposed by the Chairman, was acknowledged by Alderman George Pearson and Mr. W. H. T. Bolt, who said that the doctor was deserving of a fair remuneration, and he believed that if they stuck out they would get it.

Dr. Holder proposed "The Readers of the Papers." He eulogized Dr. Flemming's paper, and spoke of the gratitude and kindly feelings that Poor Law medical officers aroused in the hearts of the poor; it was some compensation for the injustice they often received from other sources. Mr. J. J. Simpson replied, and expressed his appreciation of the attention with which his somewhat technical paper was received.

Dr. Withers Green proposed "The President," who, having expressed his thanks, concluded by proposing the health of Dr. W. Brown, who had so successfully organized their dinner. This was drunk with musical honours.

THE SALARIES OF MEDICAL OFFICERS OF HEALTH.

The council of the Urban District of Bilston, Staffordshire, on June 27th again had under consideration the question of its medical officer's salary, and this time very nearly determined to fall in with the views of the Local Government Board and of many of the ratepayers. In other words the council only rejected by one vote a motion in the form of an amendment which, if accepted, would have committed the council to adding to that salary an amount proportionate to the increase in the medical officer's duties during the past fifteen years. The council was supplied with figures showing that many towns in the neighbourhood were paying proportionately much higher sums to their medical officers, and one councillor summed up the whole situation by suggesting that if the medical officer fifteen years ago was worth £100 per annum, it went without saying that his services must be worth much more to-day. As it happens, the force of such an argument was in the very week of that meeting recognized in a locality not very far from Bilston by the council of the Bucklow Rural District (which has an area containing a population of some 22,000 against Bilston's 25,000) raising its medical officer's salary to £205. This officer, Dr. T. W. H. Garstang, happens to have been appointed much about the same time as Dr. Bailey at Bilston, and his latest increase is the second granted in the course of his tenure of office. It was accorded almost without a dissentient voice on the ground that since he took up office his duties had been materially increased by the same causes as those operative at Bilston.

INFECTIOUS DISEASE IN FLATS.

Hygeia.—Most medical officers of health would urge the removal to an isolation hospital of a child living in a flat which was one of a dozen in the same block. In the event of such a child not being removed, the parents would be advised to keep visitors from the flat, and to see that other persons in the flat did not visit, or mix with any other people. It would hardly appear necessary, however, for the children living in the uninfected flats in the block to be taken away on the off-chance of their meeting inmates of the infected flat while passing through the entrance hall which is common to all the flats.

Universities and Colleges.

UNIVERSITY OF OXFORD.

Degrees.

The following candidates have been approved at the examinations indicated:

First M.B. *Organic Chemistry:* E. Barnard, C. J. A. Buckell, W. S. Dawson, H. K. Denham, H. S. Jeffries, R. S. MacIver, K. A. I. Mackenzie, J. C. Paterson, N. L. Watt, J. F. West. *Human Anatomy and Human Physiology:* H. E. Bamber, G. K. Bowes, W. Burridge, W. H. Butcher, G. K. Cowie, R. J. W. A. Cushing, S. C. Dyke, G. T. Gimlette, T. E. Micklem, O. G. Parry-Jones, F. G. L. Scott, H. St. Hill Vertue, B. E. Wall, A. L. Watt, D. M. P. Whitcombe, J. B. Cavenagh.

Second M.B.—*Materia Medica and Pharmacology:* J. D. Bate, G. W. Carte, J. C. Davis, P. G. Doyne, E. W. N. Hobhouse, J. Sainsbury, G. P. Selby. *Pathology:* P. G. Doyne, R. C. Fairbairn, A. L. Pearce Gould, D. B. I. Hallett, N. F. Hallows, F. A. Hampton, M. O. Raven, T. O. Thompson, R. F. Venables, S. B. White. *Forensic Medicine and Public Health:* F. W. Browne, D. B. I. Hallett, N. F. Hallows, W. I. Hart, A. Jackson, H. G. Morris, E. A. Ramsden, J. Sainsbury, E. Scott, G. Stanger, S. B. White. *Medicine, Surgery, Midwifery:* J. L. Birley, A. Booth, C. H. Budd, N. G. Chavasse, H. T. Evans, P. L. Gibson, N. S. Lucas, D. P. MacDonald, E. A. Ramsden, G. Stanger, S. B. White, J. A. Wood.

D.P.H.—*Part I:* R. S. Agraval, R. Donald, K. P. Mather, A. H. Tebbutt. *Parts I and II:* L. E. Acomb, W. A. Berry, F. G. Caley, H. K. Fry, L. P. Johnson. *Part II:* W. F. Rhodes, W. P. Watson.

UNIVERSITY OF CAMBRIDGE.

Prizes.

The Raymond Horton-Smith Prize for 1912 has been awarded to V. J. Woolley for a thesis for a degree of the Doctor of Medicine; proximè accessit, Alfred E. Barclay.

Appointment.

Dr. Barclay-Smith has been reappointed University Lecturer in Advanced Human Anatomy.

UNIVERSITY OF LONDON.

Meeting of the Senate.

Meetings of the Senate were held on May 30th and June 12th.

Site for the University.

It was resolved that a committee, consisting of thirteen members, in addition to the official members, be appointed to consider and report on the question of an adequate site for the head quarters of the university, and generally on the question of accommodation from the point of view of the development of the university as a whole, with power to communicate with persons and bodies at their discretion.

Election of Vice-Chancellor.

At the meeting on June 12th Dr. W. P. Herringham, F.R.C.P., was elected Vice-Chancellor for the year 1912, in succession to Sir William Collins, M.D., M.S., and a vote of thanks was accorded to Sir William Collins for the services he had rendered the university during his tenure of office.

Appointment of Representatives.

The following appointments of representatives at the functions indicated were announced:

Royal Sanitary Institute Congress at York: Dr. E. C. Seaton.
Lister Memorial Committee: Sir Alfred Gould, K.C.V.O.
International Congress of Americanists: Dr. C. G. Seligmann.

Boards of Examiners for Internal Students.

Professor W. D. Halliburton, F.R.S., and Professor C. G. Barkla, D.Sc., M.A., have been added to the Board of Examiners in Psychology for the B.Sc., Honours Examination.

University Medal.

The university medal at the M.B., B.S. Examination, May, 1912, has been awarded to Mr. Philip Henry Mitchener, of St. Thomas's Hospital.

UNIVERSITY OF DURHAM.

Degrees.

The following were among the degrees and diplomas conferred at a meeting of Convocation on June 25th:

M.D.—Helen G. Clark, S. F. St.D. Green, D. M. Johnstone, C. G. Kemp, C. F. M. Saint.
M.D. (*for Practitioners of Fifteen Years' Standing*).—W. J. M. Barry, Lilian V. Cooper, C. Corben, A. E. Dodson, E. G. Gibbs-Smith, H. E. Goulden, C. G. Higginson, R. H. King, J. C. McWalter, R. Odell, E. A. B. Poole, J. R. Russell.
M.S.—C. F. M. Saint.
M.B.—J. B. Alderson, Evelyn A. Constable, N. Hodgson, H. L. James, J. Kerr, F. J. Lidderdale, L. G. Pearson, F. Phillips, T. C. Storey, C. J. V. Swahnberg, S. K. Young.
B.S.—O. F. D. Airth, R. G. Badenoch, Evelyn A. Constable, R. C. H. Francis, N. Hodgson, H. L. James, J. Kerr, F. J. Lidderdale, F. Phillips, T. C. Storey, S. K. Young.
D.P.H.—G. B. Harland, W. Mackenzie.

Examinations.

The following candidates have been approved at the examinations indicated:

Second M.B. (*Anatomy and Physiology*).—*H. Evers, J. F. C. Braine, C. C. H. Cuff, H. G. B. Dove, Ethne Haigh, R. A. Hooper, Ah Chit Jap, E. Ek Dun Lau, J. E. Measham, C. W. Morris, J. D. Proud, D. O. Richards, H. G. Sparrow, E. J. Tyrrell, H. Williamson.

* Second class honours.

First M.B. (*Elementary Anatomy and Biology, Chemistry and Physics*). —*J. Gilmour, N. Braithwaite, H. C. Broadhurst, W. J. Hooper, G. N. Metzger, R. R. Scott.
Chemistry and Physics.—J. Brumwell, Dorothy E. Butcher, G. A. Clark, R. N. Craig, Mary R. Campbell, W. A. Hewitson, J. Horsley, R. Hunter, J. K. R. Landelle, Phyllis Marriott, R. S. Millar, G. F. Philip, W. O. F. Sinclair, K. I. Shalaby.
Elementary Anatomy and Biology.—Stephanie P. L. H. Daniel, C. T. Helsham, D. Henegan, P. Hickey, R. B. Pirrie, W. A. Tweddle.

* First class honours.

UNIVERSITY OF BIRMINGHAM.

The following candidates have been approved in the examinations indicated:

Final M.B., Ch.B.—G. H. Alabaster, G. E. Elkington, *J. B. Lowe, Violet M. McCready, C. L. Spackman, R. J. T. Thornhill, A. A. Wilkinson.

* Awarded an Ingleby Scholarship of £10 on examination in Midwifery and Diseases of Women.

UNIVERSITY OF DUBLIN.

THE following were among the degrees conferred at a meeting of the Senate on June 29th:

M.D. (*Honoris Causâ*).—G. L. Gubbins.
M.D.—G. Boxwell, A. Chance, F. S. Crean, F. Crosbie, T. G. Hardman, G. F. C. Healy, C. Kelly, M. M'Knight, M. S. Moore, R. W. Murphy, H. J. Smyly, B. Solomons.
M.B., CH.B., B.A.O.—O. V. Burrows, A. Chance, J. Colgan, F. S. Crean, H. H. Counihan, R. A. Flood, J. H. Grove-White, H. P. Harpur, J. T. D. Higgins, R. Johnson, R. H. C. Lyons, Dorothy K. Milne, A. C. Redelinghuys, R. E. Tottenham, H. G. Trayer.

CONJOINT BOARD IN IRELAND.

THE following candidates have been approved at the examination indicated:

THIRD COLLEGE.—*R. J. Brookes, R. A. Austin, H. A. S. Deane, G. S. Douglas, J. Lanigan, F. B. McTavish, J. J. O'Connell, H. O'Donoghue, J. J. Reynolds, M. Shipsey, F. M. Taylor.

*Passed with honours.

Obituary.

THE LATE DR. C. G. KNIGHT.—Dr. J. S. Prowse (Manchester) writes with reference to Dr. C. G. Knight, whose death through a bicycle accident was mentioned last week, as follows: After starting in practice at Chorlton about two years ago, Dr. Knight became a regular attendant at the meetings of the Manchester (West) Division, and soon took office as Assistant Honorary Secretary. His genuine modesty, frank geniality, and willingness to work, rapidly won for him the respect and affection of those with whom he came into contact. His election, only three weeks ago, to the Senior Honorary Secretaryship was an expression of this general good feeling, and of the trust in him engendered by his loyal co operation with his colleagues and quiet enthusiasm in the work which has occupied the Division during the troublous times of the past twelve months. As Secretary to the local Provisional Medical Committee he had lately made strenuous efforts to secure a complete response to the appeal for pledges and guarantees. Quiet and retiring in disposition, he yet formed strong convictions, and was well able to uphold them in argument. I have always been impressed by his freedom from bias and his absolute fairness to others. He had in him the promise of a successful career, both as a general practitioner and as a worker in the Division for the good of the medical body. He was a fine example of the best type of young doctors. It is to men of like character to his that we look for carrying on the hard spadework necessary, especially in these critical times, for entrenching and safeguarding the best traditions of the profession. If the backbone of the Association is formed of such men, we need not fear for its future.

Medical News.

AT a meeting of the Society for the Study of Inebriety, at 4 p.m. on Tuesday next at the house of the Medical Society of London, Chandos Street, London, W., the President, Mrs. Mary Scharlieb, M.D., M.S., will give a short address. Afterwards Dr. T. B. Hyslop will deliver a lecture on inebriety and art, illustrated by the epidiascope.

A SPECIAL meeting of the Ophthalmological Society of the United Kingdom will be held on Thursday next at the house of the Medical Society of London at 5 p.m., to consider the question of the amalgamation of the society with the Royal Society of Medicine. An ordinary meeting will be held at 8 p.m., and subsequently the annual general meeting.

THE annual meeting of Fellows of the Royal Society of Medicine was held on July 1st, when the following officers were elected for the session 1912: *President*, Sir Francis H. Champneys, Bart., M.D.; *Honorary Treasurers*, Sir William S. Church, Bart., Sir Henry Morris, Bart.; *Honorary Librarians*, Sir Rickman J. Godlee, Bart., Dr. Norman Moore; *Honorary Secretaries*, Mr. Herbert S. Pendlebury, F.R.C.S., Dr. E. Farquhar Buzzard.

AT the annual meeting of the Society for the Prevention and Cure of Consumption in the County of Durham, on June 29th, the services of its founder and present chairman, Dr. William Robinson, were recognized by the presentation to him of a silver salver. The presentation was made on behalf of workmen and of the governors of the society by Dr. Hubbersty of Sunderland, who said that it was in the course of an address delivered as President of the North of England Branch of the British Medical Association that Dr. Robinson had first put forward the suggestion for the foundation of the society and the establishment of Stanhope Sanatorium. It was opened in May, 1900, and at first had only 12 beds, but since then the accommodation had been raised to 45 beds, and a second sanatorium, one for women and containing 30 beds, has been provided.

THE usual monthly meeting of the Executive Committee of the Medical Sickness, Annuity, and Life Assurance Society was held at 429, Strand, London, W.C., on June 21st, Dr. F. J. Allan in the chair. The accounts presented showed the business of the society to be steadily growing, a considerable addition to the funds having been made since the beginning of the year. A cordial vote of thanks was unanimously passed to Dr. F. de Havilland Hall, F.R.C.P., the retiring chairman, now president, for the valuable services he has rendered to the society during the many years he has been connected with it, and in recognition of Dr. Hall's work it was agreed to present a substantial sum to Epsom College as a permanent record of his services. The society now has a large number of votes in Epsom College, and these are given only to members of the Medical Sickness Society or their relatives. Prospectuses and all further particulars of the society on application to Mr. Bertram Sutton, Secretary, Medical Sickness and Accident Society, 33, Chancery Lane, W.C.

THE Biennial Health Conference and Exhibition, held in co-operation with the National Health Society, was opened by the Mayor of Westminster on June 24th at the Horticultural Hall, Vincent Square, and lasted until the following Thursday, June 27th. Amongst those present at the opening ceremony were Professor H. R. Kenwood, Mr. H. W. Armit, Muriel Viscountess Helmsley, and Miss Haldane. As usual, the exhibition contained a large variety of novel and ingenious appliances intended both to lessen the risks of infection and to promote a better observation and understanding of the laws of health. A model disinfectant cupboard, a patent "recumbent invalid lifter," and a street fountain constructed in such a fashion that the most fertile source of infection, the common cup, is rendered unnecessary, were amongst a few of the most noticeable inventions; whilst useful lessons were to be learnt from the lifelike models of good and bad larders, and the exposition of the "filtered-air" system of blinds and ventilators, in which a piece of muslin is stretched across the opening to absorb impurities contained in the air passing in at an open window. Demonstrations of Swedish gymnastics, ju-jitsu, and physical drill were given daily in the hall, and a series of interesting conferences was held in connexion with the exhibition at the London County Council Technical Institute next door.

UNTIL recent years attempts to solve the problem of intemperance could be divided into the repressive and the "free trade in liquor" of trade advocates. The Public House Trust, founded by Earl Grey, has struck out in another direction, and already controls over two hundred and ninety houses, in which non-alcoholic refreshments can be as easily obtained as alcoholic liquors. In a preface to the last report of the Home Counties Public House Trust, Limited, Earl Grey states that the object of the trust is to manage the houses in such a way as would tend by slow and sure degrees to change the tastes and habits of the customers from fuddling their brains and deadening their bodies and impairing their health by alcoholic potations to other tastes more conducive to health and happiness. The managers have no incentive to push the sale of alcoholic drink, for they earn a commission only on the sale of non-alcoholic refreshments. It is stated that in some of the houses 70 per cent. of the trade is in non-alcoholic commodities; and at the Lightship Inn, Beckton, 89,700 meals were served in a twelvemonth. Persons known to be habitual drunkards are refused admittance, whether drunk or sober. Everything is done to make the houses cheerful and as little as possible like the secluded drinking den calling itself a "public" house. Bright pictures hang on the walls instead of brewer's showcards; games and music deter the customers from "boozing," and do not lead to gambling, whilst those in search of food need not go through the rooms or passages where alcohol is sold. Earl Grey says it pays to substitute good food for alcoholic drinks, and if the provision of such houses, managed on such lines, can keep the consumption of alcohol within the bounds of abstemiousness, the days of the too numerous licensed houses, which are neither more nor less than drinking shops, should be numbered.

Letters, Notes, and Answers.

ORIGINAL ARTICLES and LETTERS *forwarded for publication are understood to be offered to the* BRITISH MEDICAL JOURNAL *alone unless the contrary be stated.*

COMMUNICATIONS respecting Editorial matters should be addressed to the Editor, 429, Strand, London, W.C.; those concerning business matters, advertisements, non-delivery of the JOURNAL, etc., should be addressed to the Office, 429, Strand, London, W.C.

MANUSCRIPTS FORWARDED TO THE OFFICE OF THIS JOURNAL CANNOT UNDER ANY CIRCUMSTANCES BE RETURNED.

AUTHORS desiring reprints of their articles published in the BRITISH MEDICAL JOURNAL are requested to communicate with the Office, 429, Strand, W.C., on receipt of proof.

CORRESPONDENTS who wish notice to be taken of their communications should authenticate them with their names—of course not necessarily for publication.

CORRESPONDENTS not answered are requested to look at the Notices to Correspondents of the following week.

TELEGRAPHIC ADDRESS.—The telegraphic address of the EDITOR of the BRITISH MEDICAL JOURNAL is *Aitiology, London.* The telegraphic address of the BRITISH MEDICAL JOURNAL is *Articulate, London.*

TELEPHONE (National):—
2631, Gerrard, EDITOR, BRITISH MEDICAL JOURNAL.
2630, Gerrard, BRITISH MEDICAL ASSOCIATION.
2634, Gerrard, MEDICAL SECRETARY.

☞ *Queries, answers, and communications relating to subjects to which special departments of the* BRITISH MEDICAL JOURNAL *are devoted will be found under their respective headings.*

QUERIES.

DR. STANLEY CARPENTER, 13, Abinger Road, Deptford, S.E., desires to find a home for a medical man incapacitated by chronic malaria who could not pay more than £2 5s. per week.

VENETIAN FEVER.

M. writes: A lady, who six weeks ago stayed fourteen days in Venice, was bitten by mosquitos during the first week of her stay, and during the second week had an evening temperature of 102°, and profuse sweats. She has now been at home for a month, and has had quinine, at first in 5-grain doses four times a day, later in one dose of 15 grains before the temperature went up. She still has an evening temperature of 100° and night sweats. No other cause can be found. No malarial parasite has been found in her blood. Any information as to the nature, cause, or treatment of Venetian fever would be gratefully received.

INCOME TAX.

MEMO, having made his income tax return for the year 1911–12 on the average profits of the three preceding years, subsequently obtained three appointments in the course of the year 1911–12, for which further separate assessments have been made. He wishes to know the proper basis of assessment in such a case.

*** If "Memo" elects to have his salaries and fees from appointments assessed under Schedule D as part of his professional profits there should, under the arrangement made by the Board of Inland Revenue, be no separate assessment on the receipts from the appointments. The addition of the appointments should be treated precisely as an access of new patients would be, that is, the fees should not affect the current year's liability, but should go to swell the average profits taken as the basis of future charges. If our correspondent wishes to keep his appointments distinct from his general practice for income tax purposes, the proper basis of assessment of the profits of the appointments under Schedule E for the year 1911–12 will be the amount of fees receivable prior to April 5th, 1912.

ANSWERS.

DR. JOS. P. BOLTON (Nottingham) writes: "Arthritis" should search for any source of toxic absorption, especially in mouth, nose, and abdomen. For treatment, salicylate passed in at the negative pole of a continuous current battery, or high-frequency current massage.

BEMBRIDGE writes: In reply to "Arthritis" I can quote my own case, which was one of osteo-arthritis of metatarso-phalangeal joints in both feet. Acting under the advice of Sir William Bennett, I practically cured myself by ionic treatment. Although possibly not strictly of traumatic origin, my troubles were caused by badly fitting boots—that is, there was no rheumatic, gouty, or other taint.

LETTERS, NOTES, ETC.

MEDICAL BARONETS.

DR. CLIPPINGDALE writes: In the JOURNAL for May 25th you were so good as to publish a list, compiled by myself, of Medical Baronets, 1645–1911. I suppose that in such a list, the first, I think, of its kind, mistakes, either of admission or omission, are inevitable. I regret to find the list I refer to contains several such mistakes—some slight, others serious. I shall be glad, therefore, if you will allow me to publish the following corrections, for which I have to thank Dr. R. H. Popham Baker, Dr. James Cameron, Mr. Alban Doran, Sir Dyce Duckworth, Mr. McAdam Eccles, and Lieutenant-Colonel Younge.

(1) Sir George Baker's baronetcy was incorrectly stated to be merged in that of Rhodes. There is no Rhodes baronetcy. The fourth holder of the title adopted the name of Rhodes; consequently, under that name the dignity now exists.

(2) Sir Ernest Burrows is not the *second*, but the *third* baronet of his line.

(3) Sir James Clark's name was spelt not with *e* but with *k* as the terminal letter.

(4) Sir Richard Croft's distinguished patient was *daughter*, not *wife*, of the Prince Regent.

(5) Sir Henry Halford's inherited estate was *Wistow*, not *Winstow*.

(6) Sir James Hay's baronetcy was conferred by *James VI*, not by *James IV*, of Scotland. The error was not the printer's, as suggested by Dr. Cameron, but my own.

(7) Sir James McGrigor's baronetcy is not extinct, as stated, but is held by the head of the distinguished banking firm of Sir C. R. McGrigor and Co., as pointed out by Colonel Younge, who also points out that the first syllable of the patronymic is not *Mac*, but *Mc*.

(8) Sir William Osler's son and heir was born, not in *1900*, but in *1896*.

(9) Sir Hugh Smithson, the "Apothecary-Duke," was not himself a grantee, but a descendant of the grantee, of a baronetcy. His name should, therefore, be transferred from the list of those who acquired to the list of those who inherited the distinction. With regard to his peerage, Cockayne, Clarenceux King of Arms, states that Smithson became Earl of Northumberland, February 7th, 1749; acquired by Act of Parliament the right to the name and arms of Percy, April 12th, 1750; and was created Duke of Northumberland, October 22nd, 1766.

CONUNDRUMS OF DIAGNOSIS.

THE account given of themselves even by intelligent patients is often, as we all know, very puzzling, though it should not be too lightly put aside. An uneducated patient's letter may in itself be a problem which tasks the diagnostic ingenuity of the doctor. We have before us several specimens which have been kindly sent by various readers. One, addressed "To the Doctor," is to the following effect: "Dear Sir, I cant tell you my spaint because I cannot talk plainly. My first pain is went I eat something my bally begines to heir me. I have got very pain in my blally. I care eat nothing because I have got no appertice. My stomach dont boils and it burns me." The man was suffering from indigestion and bad teeth. Another letter, which comes to us from South Africa, runs as follows: "Doctor, Dear Sir, please me so kind I am very sick. I have no money you must give me big bottle. I am very sorry you know for me. I am know it is a post sick fifa. I am very glad my master please me so kind your money I paid for this week is come. I am very poor in the ground. The money I am got it is the halfcrown my chest is very sick. Please my muster to help for me I am a poor man in the ground you must give me hard pain. I stop now." From this cryptic epistle the unfortunate doctor was expected to make a diagnosis. The faith in the "big bottle" and the insistence on his inability to pay show that our black brother is very like the ordinary white patient. A third letter is from a Kafir, who describes his troubles as follows: "Dear Sir, I trust you will forgive me for trespassing upon your valuable interval will you please sir give me medicine I am sick today the sick commenced to the midnight toms. The parts of my sickness which is happened to me my head is sick and plate I mean the end of my tongue in my mouth also cancelling sickness. I have three parts in my body which is not quite convinced and my ears are pain at end of it. The end of it very enthusiasm comes hot breath like the wind of the west that Carbonic Acid Gas just like so sir." The sentence in which the writer says he has three parts in his body which are not quite convinced seems to suggest an imperfect belief in Christian Science. The description of the "enthusiasm" which seems to be the climax of the attack is almost poetical in its vividness. Our correspondents ask for suggestions as to diagnosis and treatment.

SCALE OF CHARGES FOR ADVERTISEMENTS IN THE BRITISH MEDICAL JOURNAL.

	£	s.	d.
Eight lines and under	0	4	0
Each additional line	0	0	6
A whole column	2	13	4
A page	8	0	0

An average line contains six words.

All remittances by Post Office Orders must be made payable to the British Medical Association at the General Post Office, London. No responsibility will be accepted for any such remittance not so safeguarded.

Advertisements should be delivered, addressed to the Manager, 429, Strand, London, not later than the first post on Wednesday morning preceding publication, and, if not paid for at the time, should be accompanied by a reference.

NOTE.—It is against the rules of the Post Office to receive *poste restante* letters addressed either in initials or numbers.